SHIFT
HANDBOOK
Shared Information Framework and Technology

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	Form Approved OMB No. 0704-0188

Report Documentation Page

1. REPORT DATE **01 FEB 2009**	2. REPORT TYPE **Final**	3. DATES COVERED **-**

4. TITLE AND SUBTITLE **Shared Information Framework and Technology Handbook**	5a. CONTRACT NUMBER
	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S) **Hannu Kotipelto, Juha-Matti Seppänen. Sami Vesterinen, Rauno Kuusisto, Hannes Seppänen, Nicolaas de Zwager, Wolfgang Gressmann**	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Crisis Management Initiative, Helsinki, Finland**	8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) **USJFCOM J9 Joint Concept Development and Experimentation, Suffolk, VA**	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
The original document contains color images.

14. ABSTRACT

Shared Information Framework and Technology (SHIFT) as a concept and a practical solution has been developed alongside the Multinational Experiment 5 (MNE 5) series to cover the aspects of information sharing as a concept and its supporting tools within a comprehensive approach framework. The development work on SHIFT was lead by Finland. SHIFT is an effort to enhance information sharing between different crisis response actors. The overall objective of the SHIFT Handbook is to analyse the challenges and opportunities for information sharing between various crisis management actors in the field and discuss the SHIFT concept aimed to overcome some of these key challenges.

15. SUBJECT TERMS

multinational, experimentation, MNE, information sharing, crisis management

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**UU**	**79**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

PREFACE

The number and scope of international crisis management operations have increased dramatically over the past 15 years. As a response to this and to the changing nature and increased complexity of contemporary conflicts, crisis management operations have evolved from traditional peacekeeping to include peace enforcement and large-scale civilian operations. Also, the number of different crisis management actors has multiplied. Today the crisis management community consists of various actors including governments, international organizations, private companies and non-governmental organizations which often represent different sectors - military, political, economic, humanitarian etc. - with divergent missions and agendas.

Areas affected by crises often lack communication infrastructure. Especially local actors, both governmental and non-governmental, suffer from a lack of skill and access to information and communication systems. Typically, the planning and development of communication systems take place within each international organization. The solutions may meet the respective organization's requirements, but they lack the interface to the systems of other relevant actors in the field. Such a patchwork of separate systems neither improves information sharing nor guarantees the safety and security of communities and personnel in crisis environments.

Lessons identified in the field emphasize that information exchange between organizations is limited and the process to create trusted information sharing practises is slow. Well-functioning information sharing procedures cannot be developed during operative activity. Ideally, they should, at least to some degree, be in place already when the operative activity in the conflict region starts.

Shared Information Framework and Technology (SHIFT) as a concept and a practical solution has been developed alongside the Multinational Experiment 5 (MNE5) series to cover the aspects of information sharing as a concept and its supporting tools within a comprehensive approach framework. The development work on SHIFT was lead by Finland.

SHIFT is an effort to enhance information sharing between different crisis response actors. The overall objective of the SHIFT Handbook is to analyse the challenges and opportunities for information sharing between various crisis management actors in the field and discuss the SHIFT concept aimed to overcome some of these key challenges.

The first part of the Handbook seeks to describe aspects of modern crisis management in order to give the reader a picture of some of the challenges we face in modern crisis management. In the second part, the SHIFT approach is presented and discussed how SHIFT could address the challenges in contemporary crisis management explicated in the part one.

The third part of the Handbook introduces the technological solution that was used to demonstrate the SHIFT Concept. It provides a basic user manual for using the current version of the tools. The chapter 5 of the third part is composed of five feasible and not so fictitious example cases where SHIFT system would offer optional and perhaps more efficient modus operandi in the context of modern crisis management.

Although this SHIFT Handbook has been edited by us, there are many project partners that have largely contributed to the content: Sami Vesterinen, Rauno Kuusisto, Hannes Seppänen as well as Nicolaas de Zwager and Wolfgang Gressmann from IASCI to name some. Other contributors have been mentioned in the references. We wish to thank each of them not only for their contribution to Handbook but for their efforts in the demanding SHIFT project.

Helsinki, 1 February 2009

Hannu Kotipelto & Juha-Matti Seppänen

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Part I

1 CRISIS MANAGEMENT IN MODERN CRISIS RESPONSE

1.1   Complexity of present crisis management

A majority of today's armed conflicts happen inside states rather than between them. These conflicts often involve systematic violations of human rights and of international humanitarian law. They are also characterised by collapsed state structures, and political mobilisation based on ethnic or religious identities.

State failure is a worldwide phenomenon, but especially Sub-Saharan Africa has experienced failed states in abundance, for example Somalia, the Democratic Republic of Congo and Liberia. Other examples include countries like Haiti and Afghanistan. It has been estimated that wars in and among failed states have killed more than eight million people since the early 1990s.

Violence is changing its form. Government-organised violence is indeed diminishing, but fragmented violence is on the increase. The line between criminal and military organisations is becoming more obscure as para-military troops, terrorist organisations and warlords fill the scene. In today's wars, non-combatants are ten times more likely to be the victims than soldiers. And most of the victims of modern conflicts are killed with light weapons.[1]

After the end of the Cold War the nature of peacekeeping and the means of managing crisis situations have been profoundly transformed as well. The conflict resolution capabilities of international organizations such as the UN, the OSCE and the EU, as well as of relevant NGOs, have been challenged by the proliferation and complexity of contemporary conflicts. These developments have fundamentally changed the role of the international community. Previously core tasks of monitoring and advising have been largely supplanted by executive mandates.

There has been a growth of understanding among organisations of each other's mandate and activities. The critical output has been the comprehension of the need to co-operate to achieve optimal results. However, there are still far too many examples of inter-agency and inter-

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[1] Ahtisaari (2004).

entity rivalry in the field impeding progress and exacerbating what is often an already negative perception of the international operation on the part of the local population. Overlapping mandates often result in tensions and the ability of a multi-faceted operation to function on the ground is frequently determined by the quality of the personnel and the leadership on the ground, rather than by contingency plans or formulae for cooperation. This is equally the case for the different specialised agencies as it is for the military and civilian components of an operation.

One of the key challenges in the field is the fact that so many different players are necessarily involved - the UN, its specialised agencies, regional organisations, NGOs and so on. The imperative of coherent action in the civilian world is often much more difficult to achieve than that in peacekeeping operations which operate under a unified command. Modern information technology, common standards and interoperability could usefully be applied here in order to facilitate communication and co-ordination for optimal results.

Crisis management can include both military and civilian tasks and the corresponding actors. Often two or more fundamentally different operations must be carried out in parallel. Military crisis management is usually necessary in order to end hostilities and to restore peace and security on the ground. The primary aim of peacekeeping operations is to prevent violence and to create basic conditions for communities to function properly again. In recent crises, peacekeeping operations have focused particularly on the protection of civilians. They are also often designed to ensure that humanitarian aid intended for civilians reaches its target.

At the same time, the demand for civilian crisis management has increased. A central task is to support democracy and strengthen the rule of law. In many cases, this involves down-to-earth practical work on the ground. For instance, a stable society needs a well-functioning local police force. Without the concrete help of international civilian police officers this is often impossible. A solid local government is essential for the society to recover.

This mixture of civilian and military, preventive and post-conflict crisis management tasks presents a multifaceted and complex task challenge. There can be a tendency by the military component of an operation to see peace support operations as war scaled down, with consequences, which may include excessive focus on domination through superior force to minimise risks to troops, limit tasks and shape a subsequent exit strategy. Equally, when civilian organisations are involved, this kind of operation can been perceived as foreign and security policy scaled up, or process bureaucracy extended into a new field. This can exacerbate the

difficulty in meeting the minimum standards of rapid reaction, rapid resource flow.[2]

1.2 Comprehensive approach

The nature of international crisis management operations has changed in the last decade. Not only have such operations increased in frequency and size, but they have also become more complex. The erosion of state structures, the dissolution of entire states, as well as civil wars, create opportunities for armed groups and non-state actors and encourage terrorism, organized crime, corruption, and trafficking in humans and drugs. Managing these complex crises requires a wide range of internal and external actors, including governments, civil society, the private sector and international agencies, to work together in a coherent and coordinated effort. Security and development cannot be guaranteed by the efforts of any one nation or organisation alone. Instead, it requires effective multilateralism and a networked approach combining all available civil and military instruments in the best possible way. The political, security, economic and social spheres are interdependent: failure in one risks failure in all others.

The amount and complexity of the actors, both internal and external, is a particular challenge from the perspective of Comprehensive Approach. Internal actors vary from governmental officials and parties to the conflict to private sector agents and local NGOs, and the variety of external actors can include peace operation(s), other international organisations and NGOs, donor governments and representatives of the private sector. This complexity highlights the need to develop coherence and coordination at different levels in parallel; within an organisation or government, between organisations and governments and between external and internal actors in crisis areas.[3]

1.2.1 Cooperation and coordination

As the complexity in crisis management has grown, in many missions and operations organisational relations and responsibilities are not necessarily clearly delineated – such as in the relations between military and civilian operators. As no single authority exists that can manage the

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[2] Seminar on Crisis Management and Information Technology 2002, 6-7.
[3] Comprehensive Approach Seminar (CAS) (2008).

various responders to crises, international peace-building efforts are often confused, difficult and even chaotic in the field.

In this chaos, the international community has a shared objective to stabilise and rebuild a country after a conflict. The aim of the international community is to leave behind a country with sustainable democratic structures, civil society, functioning rule of law and economy. Accomplishment of this objective requires efficient coordination of activities and sharing of information between organisations working in the field as well as access to new data and databases, such as images, maps, and geographical, building and infrastructure information.

The number and diversity of actors and networks involved in crisis management creates multiple coordination challenges. Organisations working in crisis management at any level, whether governmental, intergovernmental or nongovernmental, are competing for resources. One implication of this state of affairs is that organisations will not invest in initiatives that do not deliver concrete returns to them.

1.2.2 Need for better information sharing and interoperability

Inaccurate, misleading or inadequate information leads to inefficient programmes that fail to achieve their objectives, the continued suffering of local populations, or even the loss of life of agency staff. New technology has the potential to improve the effectiveness of our work in responding to crises and conflicts – as long as, at the same time, we generate the political will to implement the necessary changes within our institutions and across historically separate sectors.[4]

Proper management of information and the resulting analysis of crisis situations are crucial for informed decision-making and the effective use of resources. In any crisis management situation, the critical factor in making timely, appropriate decisions is to have the benefit of the optimum amount of quality information.

This information may come from a variety of sources that need to be integrated in an information system that is appropriate for the environment in which it is used. The situations on the ground are often extremely complex and volatile and can change rapidly without warning. A coherent and co-ordinated reaction can only be based on accurate

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[4] Currion & Steinberger (2006), 372.

information that must be produced and transmitted with speed and precision.

Lessons identified in the field emphasize that information exchange between organizations is limited and the process to create trusted information sharing practises is slow. Well-functioning information sharing procedures cannot be developed during operative activity. Ideally, they should, at least to some degree, be in place already when the operative activity in the conflict region starts.

On establishing interoperability, three major barriers have been identified. The first is between the different levels of crisis management – whether political, organisational, operational or technical – there are genuine issues of coherence in policy and practice, even within organisations. The second is that, within each of those different levels, for a number of reasons, there is frequently competition rather than co-operation. Crisis management is seen as a zero-sum game, where one **actor's loss is another's gain** – as opposed to an environment in which the value of resources can be multiplied by combining them. The third and final barrier is simply that the operational environment for organisations involved in crisis management works against longer-term partnership and planning. During crises there is little time to allocate resources to this type of development; between crises there is plenty of time but few resources to invest in such preparation.

In such instances, information sharing and interoperability 'problems' are often rooted in political, management and resource issues, rather than in significant technical obstacles. There is a need to move beyond the traditional view that knowledge is power when it is held by an individual or organisation and accept that information is more valuable when it is shared, providing the individual/organisation with credibility and influence through their position as an information provider.

At the strategic level, information systems need to be developed to enable organisations to develop a shared understanding of the environments in which they work; without that shared understanding the organisations will never be able to pursue coherent policies that lead to the intended outcomes in terms of peace, security and the relief of human suffering. At the operational level, it needs to be ensured that staff has access to the information resources that they require to work effectively, but also the mechanisms for sharing those resources with their partners. These tools will become increasingly vital for ensuring

that individual activities on the ground truly meet the needs of affected communities.[5]

In analyzing how sensitive information is usually conveyed in the field, there is a certain difference between formal and informal, official and unofficial networks. Rightly or wrongly, information is usually viewed—and treated—as power. Human nature tends to hoard vital information in an effort to conserve power, a habit that undercuts both the scope and the timeliness of information sharing efforts. Information sharing tends to be motivated by a sense of personal trust between actors and conveyed through informal networks. Such informal or unofficial communications are highly valued, because they usually entail a greater degree of confidentially and, through repeated use, reinforce expectations of reciprocity between those involved.

Informal networks also circumvent normal means of record keeping and, thus, retard the development of institutional memory and continuity of practice in organizations. Given the relatively high degree of staff turnover during crisis management operations, failure to build a coherent track record to guide and inform future operations can be particularly debilitating from an organizational perspective. Finally, by their nature, unofficial communications have a deliberately limited reach, thus denying larger audiences access to the information in question.[6]

In general, no major technical problems exist in the field of crisis management. Organizational obstacles and unwillingness to share information are much more important reasons. These largely stem from policy and management issues inherent in the nature of organisations and bureaucracies. Resolving them is a gradual and fitful process, which naturally frustrates those attempting to introduce efficiencies through ICT practices and procedures.

1.3   Networking and general information exchange requirements[7]

Crisis management activities in a conflict region span over a host of different actors. Their activities both exploit and create information that is supplied for and acquired by them. Often the information needed for the execution of the activities, especially for the management and

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[5] Currion & Steinberger (2006), 372-375.
[6] Security – the Common Denominator for Connectivity (2004), 6.
[7] Kuusisto (2008).

decision-making, does not meet the requirements. To enable effective action, information should flow smoothly, both internally within an organization and collaboratively between organizations. To succeed, the actors must have situational awareness and understanding. This can be achieved by using advanced technological systems combined with human analysis.

Crisis management involves activities performed on several organizational levels. Information is delivered and retrieved on each level and between them. The main levels include the policy level that guides the operational level which again reports back to the policy level. However, as crisis management activities are implemented and managed by a variety of actors, there is not any one policy level actor that can manage all actors on the operational level by implementing a classic command and control approach. Instead, the operational level activities are self-synchroni**zing. This aims at an optimal use of each actor's** resources in the specific context. One of the prerequisites for a successful self-synchronization is high quality information and shared situational awareness. This means understanding in the crisis management community of the situation, capabilities and plausible futures.

Typically, the organization structure of actors in crisis management is not designed for cross-organizational collaboration and smooth information sharing. Instead, organizations are often structured to reflect their own particular vision, mission and activities. The necessity of appropriate situational awareness and information management is **today's international crisis management thus poses challenges also to** the organizational structure of the actors.

It has been widely recognized by various crisis management actors working in the field, that there is a real and acute need to develop better information gathering and dissemination systems. Research and experience have proven that availability of information concerning the situation, competence, actors´ features, future developments and decisions is relevant for any actor active in crisis management. Nevertheless, the unbalance between shared and required information is considerable. The information that actors are willing to share is different from that they wish to receive from others.

Different reasons and interests of the various actors restrict the amount and quality of information they are willing to share. Restrictions may be based on cultural aspects, organizations´ aims and goals, organizations´ working principles as well as concerns on information security issues. However, the most critical information sharing challenge is based on the subjective nature of a human being. In general, people are not willing to tell what they are like, but how they in their own mind see the ongoing

situation and what they are going to do with it, i.e. how they in their own mind interact with the other actors. On the other hand they will others to tell them, what the others are like, and how they understand the completeness of the development of the situation. Unbalance is considerable.

Information content relevance depends on the activity that an actor is performing. Content interests are very divergent. Various actors have also different needs, capacity and methodology for analyzing the information they receive, which may lead to differing conclusions, even assuming that they may have access to same data and information, but interpret the information from their own perspective. Security, for example, is one field where there is both a need and lack of shared analysis. In many organizations, security may not necessarily be the expertise of people working in the field, or security and safety issues may be subordinated to other functions. So, there is a need for common information analysis, preferably in the form of recommendations.

Willingness to share information in networks is generally not on very high level. It seems that about 20% on information exchange is directed to networking partners. Rest of the information exchange takes place inside own organization structure. In practical situations, actors tend to focus on their own organization and follow the established action patterns. The willingness to organize ad hoc, to form task based organizations, or to self-organize is thus limited and time consuming.

The required type of shared information varies from situation to another. It is different whether it is question about situation follow-up, planning, analyzing the situation or making decisions. It differs also by the phase of collaboration, finding collaboration parties, establishing the collaboration relationships or managing a common case.

Information sharing is trust based. Creating trust is based on mutual understanding and acceptance and it takes time. Lessons identified in the field emphasize that information exchange between organizations is limited and the process to create trusted information sharing practises is slow.

Most important issues when building up the trust are: Knowing the partner, openness and honesty, and communication. Those are important when maintaining trust, as well. In addition, trust will maintain, if parties act foreseeable and the quality of information that they deliver is good.

Trust terminates, if counterparty do not keep his/her word, but says different things than putting in practice, it is mistreating its partners and/or it delivers manipulated information or hides it. If

communication skills, procedures and/or tools are not functioning, trust will terminate, as well. Same issues will prevent the trust to be built. In addition, if counterpart is known and value-basis or working principles or motives are totally different and/or thought to be unacceptable, building the trust is not possible.

Those reasons lead to two main conclusions. First, the established collaboration support solution shall contain such processes that will support, guide and help the collaborative actors to release the relevant type of information to serve both the various phases of collaboration events and relevant roles of actors. Well-functioning information sharing procedures cannot be developed during operative activity. Ideally, they should, at least to some degree, be in place already when the operative activity in the conflict region starts. Second, the credibility of an information service provider is critical. The organization providing such a service must be transparent and operate outside any other party involved in the management of the crisis. This has also to be kept in mind when recruiting people to run such services. SHIFT solution provides a good support to handle these two critical issues.

1.4 Effective use of ICT in Crisis Response

Effective use of ICTs can help to provide access to critical, real-time information, which is crucial in timely and appropriate decision-making in crisis situations. ICTs have also proven to be valuable tools in creating institutional memory of crisis management operations which are often characterised by a rapid turnover of staff. ICTs help to facilitate sharing of information and communication amongst multiple organisations and agencies working in crisis management and thus increase the multi-stakeholder coordination. Proper use of ICT would also have great impact in improving situational awareness in crisis environment where **dozens of actors work without knowing enough about each other's** activities. The lack of information sharing and associated tools have been noted as key contributing factors in some of the recent incidents resulting in death or injury of international personnel. The concerted use of ICT in crisis management can improve the safety and security of all crisis management personnel in crisis areas. Functioning information sharing between organisations improves situational awareness and creates opportunities for early-warning on threats and prevention of conflicts.[8]

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[8] Ahtisaari (2006).

Especially in time critical situations the essential information is needed as fast as possible and also distributed to the ones that it is relevant. Usability and logicalness of the system has to be designed well so that it will support the decision making and not make it more difficult. User should be familiar with communication etc. processes in organization as well in technical level. This should be taken into account in designing the system or in some other means. The system should also support the formation of ad hoc networks.

Institutional memory is related to the issue of "lessons learned," which organisations assemble from their last activity during a crisis as a review of their performance and what did or did not work. Although drawing up **"lessons learned" by organisations from the military to the** humanitarians has received universal support, to date few lessons have been systematically reviewed or institutionalised. In addition to internal institutional memory, there is a lack of global institutional memory in crisis management. Past mistakes are repeated and lessons too often not learned.

Part II

2 SHARED INFORMATION FRAMEWORK AND TECHNOLOGY (SHIFT)

2.1 Introduction to SHIFT[9]

Shared Information Framework and Technology (SHIFT) has been developed alongside the Multinational Experimentation 5 (MNE5) program to cover the aspects of information sharing as a concept and its supporting tools within a comprehensive approach framework. SHIFT is an effort to enhance communication between governmental, nongovernmental, private and local actors in the crisis and disaster **regions and to enable better "situational awareness".** SHIFT seeks to augment the existing information sharing initiatives and is not aimed to **compete with them. SHIFT could be more like "comprehensive glue" or a** missing trusted link between existing information sharing practices **which still mainly are "organizational intranets" or focused to limited functional areas only. SHIFT "compatibility" could be of an added value** for many especially on the field. SHIFT as one of MNE5 Focus areas was lead by Finland.

SHIFT is both a concept and a practical solution. As a concept, it describes possibilities to communicate between separate entities and chains of command using a trusted information sharing environment. A common interest in safety, a desire to avoid conflict and to make the resources better utilized could make the environment attractive enough for the most relevant actors in the field. SHIFT encourages exploring and – if necessary – refining the existing information sharing policies that may prohibit sharing, even when it is essential in order to achieve the desired effects or to avoid accidents or losses. SHIFT allows the actors to publish and retrieve information related not only to events and decisions but mission and vision, anticipated futures and foreseen end-states, resources and means and tasks.

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[9] **Multinational Experiment 5, Experiment Background Readings for: "CAS"**- Seminar (2008).

As a practical technological solution SHIFT is, in short:

- Based on SOA (service oriented architecture) and COTS (Commercial-off-the-shelf) principles, easy to update and to start using

- Delivering information via Internet on a web browser

- Presenting the situational picture with a map and with common understandable symbols

- Enabling collaborating through virtual meetings

- Information storing & sharing through services available for all, i.e. Wikipedia kind "SHIFTpedia"

- Conceptually all Internet services and Geospatial datasets are available.

The core SHIFT philosophy, a neutral information broker and user moderation, has been created by a multinational pool of experts and professionals from organizations involved in crisis prevention or management areas, both governmental and nongovernmental organizations.

SHIFT concept has been created in various multinational workshops and seminars during the period of 2006-2008. Both the concept and IT-tools are still experimental prototypes. Some elements have already been studied and tested in Multinational Experiment 5 events and in other exercises in Finland[10].

SHIFT is a user defined environment which means that the best ways and practices to use the environment would be shaped constantly by the SHIFT community. Therefore no strict rules are dictated either in the Concept or in this Handbook. Still - some information sharing processes are common to majority of actors; finding currently (to me) interesting actors and sharing information about assessments, future intentions or current activities are among the most obvious collaboration incentives. Best practises and processes for using the available toolset in those situations would eventually be created inside the community. In this Handbook, you can get some ideas of those processes in chapter 5, "Conceivable use cases for SHIFT"

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[10] SHIFT has been implemented and tested in Barents Rescue 2007, a multinational emergency rescue cooperation exercise and Finnish national interagency cooperation exercises Tieto 2007, Tahto 2007 and Etelä-Karjala 2008.

2.2   SHIFT Information Environment

A lack of relevant baseline data is a recurrent and serious gap in most crisis and emergency management responses. Countrywide figures are normally unreliable, out of date or inappropriate. Especially on population figures and boundaries of sub-district administrative units, responders rely on scarce, outdated and often inaccurate information. The Georgia crisis response (2008), as one recent example, was plagued by other, familiar problems: multiple assessments were conducted in some areas and no assessments in others; data was collected in different formats by different agencies; and information was not being shared effectively[11].

Secondly, there are frequent inconsistencies in the sequence of Information Management, i.e. the process of data collection, sorting, evaluation, analysis, decision making, dissemination and action, which can lead to habitual misjudgement of facts, lack of learning and knowledge transfer and ultimately, improper action.

Practitioners broadly agree that a more strategic approach is required to ensure that relevant baseline data is available before, during and after a complex emergency; such an investment is especially appropriate in countries prone to natural disasters or complex emergencies.

SHIFT is structured to best enable both vertical and lateral information sharing between diverse groups. The free flow of knowledge is sought by **encouraging users to "open source" as much i**nformation as possible, avoid the over-classification of material and relax intellectual property restrictions. While most of the content published within SHIFT will be attributable to defined users, there must also be a possibility of anonymous publishing. This allows for sensitive information to be authored by individuals without the fear of retaliation, and ensures that a positive sharing environment is maintained

Although the SHIFT platform will be managed by a dedicated organization that can ensure its functioning, this organization will not manage the content. In fact, no one organization will be able to manage the content, which will be user defined, user generated and user **moderated. No individual documents within SHIFT will be "owned" by a** user in the traditional sense, but the content will instead develop in a

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[11] The results of the Joint Integrated Rapid Assessment (IRA) as delivered by CARE International, Oxfam and World Vision to UN-OCHA in September 2008, were not entered into any data base. Only scanned copies of the original, handwritten questionnaires were uploaded by UNHCR on the dedicated website for information management in support to this crisis.

collaborative and, most likely, incremental manner. The content is likely to grow and become more refined over time, in accordance with the efforts and interests of the user community. It is characteristic for SHIFT as a platform that it is built to accept the existence of multiple **"truths," each of which can be given equal weight within the** environment. While differences between data need not to be resolved in **order to determine which is "true," it is likely** that certain information will naturally gain weight over time as users add citations, details or supporting documentation. The users, not SHIFT itself, will verify or discredit information that is false. As long as the system has active participants, it will be self-correcting. In the end, however, users will be required to exercise judgment when reviewing information, and decide for themselves whether to accept any individual piece of data. SHIFT also introduces categorizations and other transparent typologies against which the information and/or its source can be weighed, to facilitate the participants' judgment. While it is acknowledged that there is a risk of false or inappropriate material being introduced into the system by SHIFT users, the SHIFT philosophy holds that this risk is outweighed by the benefit derived from the open source environment.

There is a need for a platform for collaboration and sharing that is trusted by the users. This trust must exist for both the sharing environment itself as well as the organization that administrates it. Although this trust will only grow over time, the manner in which the organization administering SHIFT is set up and functions is a key element in building this trust.

This neutrality, independence and trust, however, cannot be considered as absolute values. When operationalised, these values will be challenged in one way or another. There might be a need to trade off some aspects of this intellectual foundation in the name of practical utility, and these practical values may supersede some of this neutrality and trust. Balancing these objectives, i.e. neutrality/independence/trust vs. practical utility, is a matter of leadership of SHIFTorg.

2.3 SHIFT Community

The SHIFT community, i.e. the organisations participating in information sharing within SHIFT, would be composed of users representing many different kinds of actors in crisis response. While SHIFT will likely reach its full potential in crisis or emergency environments, it can also exist, in a basic form at least, within pre-crisis environments. Examples of potential SHIFT users include, but are not

limited to, individuals from international and local humanitarian organizations, local authorities, international financial institutions, reconstruction and development agencies, intergovernmental organizations, civilian crisis management missions, representatives of national governments, private enterprises, emergency services organizations, political parties and other organizations, academic entities, and military organizations.

Limitations to access should be very few, with the widest possible SHIFT community being encouraged. Access should only be denied where there is documented abuse of the system – for example, the presentation of false credentials upon applying for access, or vandalism of information.

The SHIFT environment provides tools that facilitate the formation of self-defined and self-organized groups, some of which will undoubtedly cross traditional organizational lines. These communities of interest will then further develop the content available in SHIFT, both to themselves as a limited community and to other users in the wider community.

3   *IMPLEMENTING SHIFT*[12]

Many current information management systems in the field that do function to some degree can be described as being highly fragmented and far from comprehensive. To be able to avoid the shortfalls of these initiatives, SHIFT needs to differentiate from these existing initiatives and provide value added. Prepositioning is one aspect of this. Prepositioning in this context implies achieving prior agreement on fundamental roles and responsibilities between key stakeholders at global, and wherever possible at country levels. It can also be described as mandate obtainment and needs to be achieved prior to any deployment on country level. This is essential in order to ensure the operational relevance of SHIFT to its potential users and beneficiaries. SHIFT information management activities should, as far as possible, support national (host country) information systems, standards, build local capacities and maintain appropriate links with relevant government authorities. SHIFT should also recognize and prioritize the local governmental structures as information consumers, and should not duplicate national efforts in data collection of exchange. All these **prepositioning functions also support SHIFT's capability to deploy** rapidly in situations of emergency and crisis.

Closely linked with prepositioning is interoperability, defined as effective sharing of information and work processes across systems and organizational boundaries. It can also be understood as adopting and promoting common policies, information exchange procedures and technical interfaces. Many times interoperability is defined in technical terms, but without agreeing the actual purpose of SHIFT mission on Global/specific mission level, no amount of technical interoperability will achieve full fledged information sharing. Interoperability requires a shared vision that describes how local and international responders can use SHIFT and its information resources most effectively.

3.1   SHIFT Global

The following chapters are structured on an assumption that the SHIFTOrg would consist of two separate levels, i.e. SHIFT Global as well as SHIFT Local.

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[12] This chapter is largely based on SHIFT background study prepared by International Agency for Source Country Information, IASCI, (2008).

SHIFTOrg Global should have the strategic objective to gain a recognized mandate in order to successfully operate in a durable manner and on an international level - irrespective of the operating model adopted, or actual products and services SHIFTorg Global will eventually provide. The overriding objective is to gain trust and to maintain a position of neutrality between its external stakeholders/partners; and to act in consistently complementary and professional fashion.

SHIFTorg Global would need to adopt a durable operating and business model capable of delivering a unified management structure to provide leadership and resource support to the activities of both SHIFT Global as well as SHIFTorg Locals. Strategically, ensuring global and country level interoperability is one key consideration in fostering consistent acceptance of SHIFTorg as trusted Information Management partner. In this regard SHIFTorg Global will be responsible for negotiating practicable information sharing for procedures, and redefining policies with governments, the military, conflicting parties, intergovernmental organizations and other stakeholders in order to a) establish the terms for the SHIFTorg country-level projects, and b) to overcome measures that prohibit information sharing. SHIFTorg Global will remain accountable for the effective management and performance of the respective SHIFTorg Country deployments due to the risks associated with assuming financial responsibility for the projects, and the obligations inherent in establishing stand-by arrangements.

3.1.1 Alternative options for SHIFTOrg Global

Below is a comparison of different options of model and structure of SHIFTOrg Global.

Models/Features	Relative Advantages	Relative Disadvantages
Private Sector Model 1. Reliance on Fee-for Services 2. Investor-based 3. For-profit or Humanitarian Enterprise	+ Flexibility + Lower bureaucracy + Rapid Response Capacity + Scope for PPP	- Commercial motivation in conflict with SHIFT principles - Challenged neutrality/trust - Funding scheme not durable/robust - Donor/Sponsor limitations - Unwillingness of many key stakeholders to work with private sector actor - Challenges in handling sensitive information - **No proven demand for a fee-for-services based solution**
NGO Model 1. Non-profit 2. Independent 3. Civil Society based	+ High level of neutrality + Civil Society support + Flexibility + Protection issues + Ability to avail itself of donor/sponsor funding opportunities	- Open to political influence - Dependency on donor funding - **Unwillingness of many key stakeholders to work with non-governmental organisation**
Public Service Model 1. Owned by a particular government	+ Sustainable funding scheme	- Less likely to avail itself of donor/sponsor funding opportunities - SHIFTorg on Global level challenged by local ownership - Bureaucratic - Agenda driven - Exposed to political influence - **Not perceived as neutral and unlikely to be accepted**
Intergovernmental Model 1. Neutrality codified 2. Non-profit 3. Independent	+ Core funding through membership fee + Maximum neutrality + Pre-positioning and Inter-operability facilitated + Ability to avail itself of donor/sponsor funding opportunities	- Possible Vienna convention limitations - Time-factor needed for establishment - **General unwillingness of interested governments at the moment to create new IGOs**

Comparison of ideal-type operating models for SHIFTorg at __Global__ level.

According to the assessment of the authors of the SHIFT Background study, there is no meaningful alternative to the Intergovernmental Model operating model on Global level. A relative disadvantage is the

assumption that could be some unwillingness of interested governments to create a new IGO at this stage. The alternatives, listed above are not considered feasible insofar as they would be unable to meet the stated requirements of the SHIFT model.

SHIFTorg Global should be established as an Intergovernmental Organization (IGO) with independent legal personality and diplomatic status. Member countries should establish a standing Stakeholder Steering Committee including Member and observer state representation, as well as representative of the international humanitarian community[13]. This committee would be charged with **provide overall policy advice and ensure SHIFT's compliance with its** mandate, common service orientation and Terms of Reference.

SHIFTorg Global should consider joining leading international bodies related to IM issues in disaster risk reduction, crisis management and humanitarian intervention areas, as appropriate. Organization-wide interoperability should be ensured by means of standing information exchange SOPs, etc. with governments, military and international community[14].

The revenue model for SHIFTorg Global would follow the standard and well-trodden approach for IGOs, and be based on a combination on income streams including country-specific membership fees and program/project income secured from donors and sponsors. Implementing partner arrangements with relevant UN agencies and public private partnerships with corporate and other private sector sponsors could be also developed.

3.2   SHIFT Country model options

When implemented, SHIFT would not be working in an environment where there would not be any information sharing practices. SHIFT would need to seek a way working in a complementary fashion within the current environments existing actors. SHIFT would need to have a clear view how it would fit into the existing matrix of actors and pre-position itself to ensure its operational relevance to its intended users. This naturally varies from a location to another. SHIFT would need to be

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[13] Inclusive of Regional Organizations (inter alia: OAS, OSCE, NATO, EU, etc); IASC; Cluster System and Members; International and Local Non-governmental Organizations and their Coordination Mechanisms (inter alia ICVA, ECRE, etc).

[14] In particular UN OCHA, UNORC, IASC, NATO, Cluster leads and primary NGO groupings (ICVA, VOICE, etc.)

interoperable with other actors in the area. Interoperability would require adoption and promotion of common information sharing policies, information exchange procedures, possible technical interfaces, etc. This may have an effect to the neutrality and trust of SHIFT, but certain trade-offs concerning the usefulness may need to be taken.

Common SHIFTorg Country/local level features would include (but not be limited to):

- Providing standard SHIFT web-based, integrated communication tools designed to enable information sharing and features: incident mapping and Geographic Information System (GIS) tools; organizational directories; a Wikipedia-like knowledge base; discussion boards; instant messaging and internet telephony services; user defined filters, and; a robust search function.

- Pre-positioned in emergency-prone countries (target country), as feasible, rapid response capacity in cases of crisis response and no pre-positioning has been achieved

- Repository for relevant base-line data, with established lines of communication and information exchange with all relevant government structures and key civil society actors, if feasible

- Interoperability with international community (in particular UN OCHA, UNORC, IASC, cluster), primary NGO groupings (ICVA, VOICE, etc.) adjusted to local circumstances

- Interoperability extended by means of negotiated information exchange SOPs, etc. with local partners, government.

- Interoperability and relevance reinforced by some measure of target country government ownership and **'encouragement' of use during** the disaster response.

- Systematic access to analytical capacities integrated

- Mirroring the Global level, key stakeholders/partners should establish a *Country Stakeholder Steering Committee.* Membership of the committee should ideally include the key stakeholders of the **country's humanitarian community, and, where appropriate, the** country government structures. This would be the key mechanism **through which partners on the ground ensure the SHIFTorg's** priorities reflect those of its key stakeholders/partners. It should play the critical role in defining the priorities and strategy for SHIFTorg, including approving its work plan. Members of the steering committee would be expected to act as advocates in the wider

community on issues related to information management, including data standards, collection, analysis and dissemination.

Main features of three optional operating models for "SHIFTorg Country Level":

Model 1: Integrated Model (government)	Model 2: Semi-integrated Model (local partner)	Model 3: Independent Model (diplomatic)
- Establish within relevant governmental ministry or military unit, - Government Ownership	- Establish in collaboration with qualified local independent actor, - Local, civil-society ownership	- Establish as Mission of SHIFT global, - SHIFTorg Global ownership
Advantage: - Maximum durability, incl. finance, - Closest access to baseline data, information, government/military capacities	Advantage: - Maximum integration in existing civil society structures and coordination mechanisms	Advantage: - Maximum ease of implementation, maintenance of standards, - Retain largest measure of trust and neutrality
Disadvantage: - Trading off the largest measure of trust and neutrality	Disadvantage: - Open to political pressure	Disadvantage: - Minimum durability, incl. finance, - Least direct access to baseline data, information, government/military capacities

In the chapters below the three presented models are explained in more detail.

3.2.1   Integrated Model

The integrated model ideally implies a substantial period of pre-positioning in which SHIFTorg country would work with relevant governmental structures (including military). The advantage the Integrated Model is in its potential for maximum durability and local ownership by way of hand-over, up to and including financing from the **country government. It also facilitates a clear 'government-provided'** mandate and closest interoperability with and access to information (including base-line) from governmental and military capacities. The

pre-positioning model also provides the greatest differentiation (hence value-added) with existing humanitarian actors and IM providers who normally deploy after a crisis or emergency.

The primary disadvantage is the trading off of the largest measure of neutrality and potentially trust (hence utility). This scenario might be deemed most applicable in countries with a high propensity for natural and man-made disasters and where the government would welcome such capacity building and technical expertise. This is obviously not suitable in crisis interventions where the population may require protection from the government itself.

3.2.2 Semi-integrated Model

The semi-integrated model implies establishing a SHIFTorg Country-level capacity in collaboration with a qualified local independent actor. This could be a local civil society or even private sector actor. An alternative might be with engaging an international NGO with a long-term presence in the country.

As an advantage local, carefully vetted civil-society ownership could provide a reasonable level of integration in existing civil society structures and coordination mechanisms, together with a high degree of local knowledge. Full local pre-positioning could be achieved as the integrated model. Alternately, a stand-by arrangement could be developed; with some low intensity pre-crisis activity (partner identification, basic training, interoperability arrangements where possible, etc) a rapid response capacity remains possible. Its greatest disadvantage would be the possible exposure of the local implementing partner(s) to political or commercial pressure; with a commensurate loss in neutrality and utility. Not being part of the normal government, communications channels or a trusted depository of potentially sensitive information can carry its own limitations.

Possible scenarios where this model might be applicable include countries with a reasonably well-established civic society sector and regulatory framework protecting the independence of potential partners. This is most likely not-suitable for crisis intervention.

3.2.3   Independent Model

A fully independent model entails deploying a SHIFTorg Local Mission as a direct subsidiary of SHIFTorg Global. Direct ownership affords most ease of implementation, the greatest possible control over standards and the most rapid deployment. Stand-by agreements regulating diplomatic status, mandate, standard operating procedures and key interoperability issues can still be negotiated pre-deployment between the country governments and SHIFTorg Global when feasible, such as in places of high risk of natural disaster. Alternately, a local mission of SHIFTorg Global could enter a conflict zone without formal approval from a government that may not be in the position to provide it for whatever reason. In either case, direct implementation by SHIFTorg Global provides for the largest measure of trust and neutrality (hence utility)

Disadvantages could include minimum durability, incl. access to financial resources, limited understanding of the local conditions, least direct access to existing baseline data, information, and government/military capacities.

Possible scenario where this model might most appropriate would be in the case of a failed state or where the writ of the state does not extend to a certain area, or in situations of UN or other internationally mandated areas.

The revenue models for SHIFTorg Country-level would rely on a combination of the following income streams: expert support and financial transfers from SHIFT Global; country-specific program/project income from donors and sponsors; implementing partner arrangements with relevant UN agencies such as OCHA and UNDP; public-private partnerships with corporate and other private sector sponsors; user-fees and consulting contracts could also be considered in selected demand-driven service areas, such as access to base-line data, map production, analysis, and consultancy services.

3.2.4   Deployment and transition

Ideally SHIFT could be deployed prior to an emergency. SHIFT could also transition through the various phases of emergency/crisis intervention; remaining relevant from supporting first-responders through recovery to developmental activities. SHIFT has the potential of

providing an important institutional memory of the overall military (peace-keeping), humanitarian or economic interventions as other agencies phase out and others enter, each in line with their mandates. This complementary capacity can also serve as a collective knowledge base, in some measure compensating for traditionally high staff turnovers, combined with an over-reliance on personal experience and anecdotal evidence when making decisions.

A clearly defined mandate from the (host) government is a clear benefit in most emergency response cases. As part of the pre-positioning strategy, deployment and transition strategies should ideally be defined and negotiated with the government in the pre-emergency phase, taking into account questions of interoperability and utility; but at least during the **active 'emergency-response' stage of the SHIFTorg at Country level.**

Part III

4   HOW TO USE SHIFT?

4.1   SHIFT Portal

SHIFT principles can be materialized with many technologies. This part describes the use of the system that was developed to demonstrate the SHIFT Concept during the multinational experiment 5.

SHIFT portal in currently hosted by IBM Finland and is located on IBM premises. SHIFT is built for using a flexible architecture approach Service Oriented Modelling and Architecture – SOMA thus, giving a dynamic environment to add, replace and update new services based on the user needs.

The SHIFT portal is IBM® WebSphere® Portal and is based on portlet structure. In practice, portlets are small applications that are independently developed, deployed, managed, and displayed. Administrators and actors compose personalized pages by choosing and arranging portlets, resulting in customized Web pages. To put it simply, a portlet is a window on a portal site that provides a specific service or information, for example, a calendar or news feeds.   Portlets allow users to specify what kind of information should be displayed.
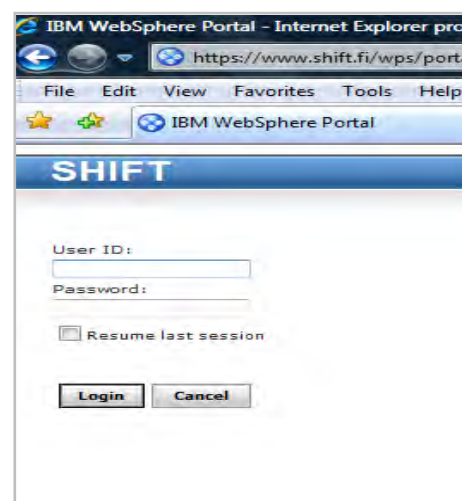
4.1.1   Logging on to SHIFT

After SHIFT user has been granted user ID and password, the user logs on the portal through SHIFT front page at www.shift.fi.

1. Enter the required information: the user name and password.

The log in procedure is same as in any commonly used web-based portal.

After login, the user may be warned with security warning.

2. Accept any security warnings that appear.

After logging on, the browser will open the SHIFT **"Home" tab** which, for the time being, has been left blank allowing user to customize the space in a way most suitable for **user's needs.**
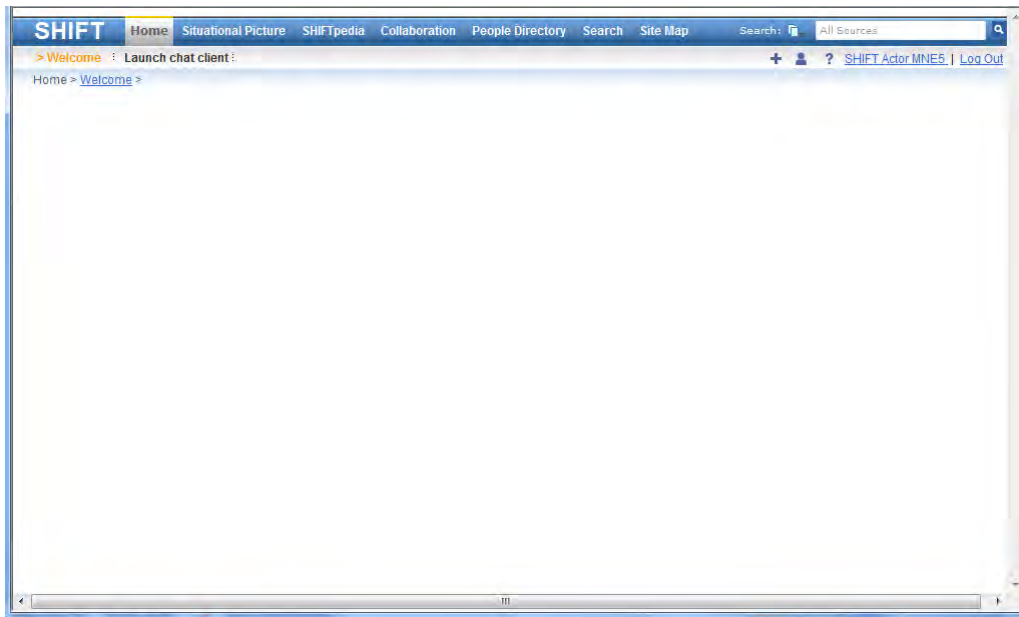
The SHIFT navigation panels can be found on the top of the page.
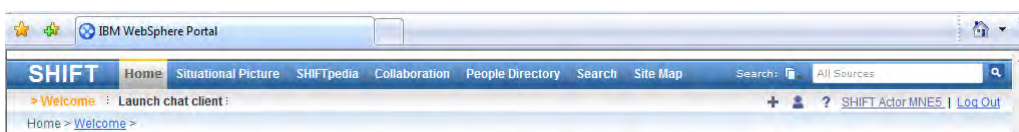
a. Navigation panel 1 (with blue background)

b. Navigation panel 2 (with grey background)

c. Path info (bellow the Navigation panel 2)

The navigation panel 1 is the main navigation panel and allows a SHIFT user to swap between SHIFT tools. The panel also contains "Quick search" (search from SHIFT) function.

Below the main navigation panel is the Navigation panel 2 where most of submenus of SHIFT tools will be shown.

Last is the path info which makes it easier for SHIFT user to keep track on location in SHIFT portal.

4.2 Overview of SHIFT Tools

Situational Picture[15] Situational Picture tool offers SHIFT users a map interface to the existing situation in a specific crisis situation. Situational Picture component used in SHIFT Portal is Insta iCM which has been engineered by Insta DefSec Ltd. Users are able to input information on incidents, infrastructures, units etc. and place them with exact location on a map using map symbology especially created for these purposes.

Situational picture has a sub-feature called Event Management which allows users to report and store incidents, accidents etc. into a database. The events can be displayed in Situational Picture as well. Event Management tool enables users to view incidents etc. as a listing which, in turn, enables to keep up the situational awareness even when the available bandwidth is low.

SHIFTpedia[16] SHIFTpedia is a Wikipedia type of collaborative and interactive tool. Any authenticated user may provide content to SHIFTpedia system, where is possible to store, organize, link data and attach documents. SHIFTpedia allows both commenting and editing the created pages further by other users.

SHIFTpedia contains also a sub-feature the SHIFT News Page. In SHIFT News page users

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[15] Situational picture tool in SHIFT prototype version is Insta iCM (inter-organisational Crisis Manager) provided by Insta DefSec Ltd
(http://www.insta.fi/home/insta_defsec/security_systems/information_sharing/insta_icm/).
[16] SHIFTpedia tool is Confluence wiki provided by Atlassian
(http://www.atlassian.com/software/confluence/).

	can create news that are displayed separately in SHIFTPedia site.
	Personal spaces are also a sub-feature of SHIFTpedia, although displayed separate from SHIFTpedia. In Personal spaces SHIFT users can distribute information about themselves and organisations they may be representing.
Collaboration	SHIFT Collaboration tool is composed of IBM Sametime[17] virtual meeting tool. SHIFT Actor is able to communicate with other SHIFT users and conduct online meetings through Sametime. Participants of a meeting can work together using audio and video connections including chat functions. Tools like Screen Sharing enable participants to work on the same document together for instance.
People Directory	People Directory enables SHIFT user to search and find other SHIFT actors, thus facilitating identifying potential collaboration partners inside SHIFT Community.
Search	The search function allows user to search the content of the SHIFTpedia. The same function is placed as Quick Access Search tab on the main navigation panel as well.
Site Map	Site Map lists the sites in SHIFT portal in the form of active link.

4.3   Getting Started

When actor is given an account and logs in to the SHIFT for the first time, additional information about the actor should be given. This information is used as actor description as well as to facilitate the searching of collaboration actors.

The information can entail for instance:

- Basic information (name, gender, location, picture)
- Contact information (email, mobile number, address, messenger, web pages, organization)

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[17] http://www-01.ibm.com/software/lotus/sametime/

- Experience (education, work, position)
- Areas of interest (expertise keywords)
- Actor location information, area of interest or action etc. (could be placed on a map in Situational Picture tool as well)
- Organization information (if actor is also representing an organization)
    - What is my organization?
    - What my organization does?
    - What ongoing activities we have on a specific region?
    - Web address of my organization etc.

In order to give information on oneself, the SHIFT user should create a personal space where the example information mentioned above could be placed.

All actor profile descriptions can be edited later. Actors are encouraged to share information concerning them (list above). This information is used in finding collaboration partners and for facilitating information sharing.

4.3.1 Creation of a Personal Space

1. **Click "SHIFTpedia" tab on the** Navigation panel 1.
2. Move the cursor above your user ID and a new menu will show up.
3. **Choose the "Preferences" and click it.**
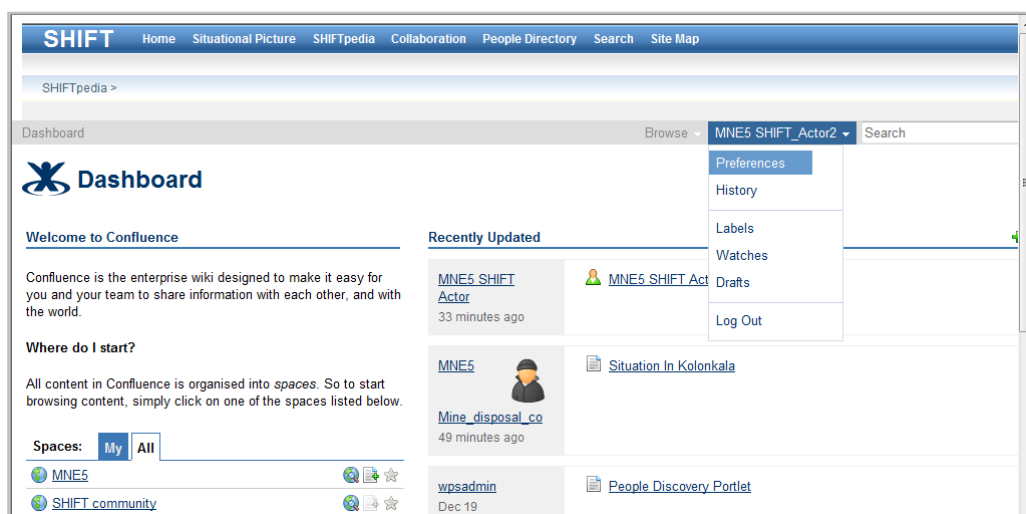
The following page will show up:
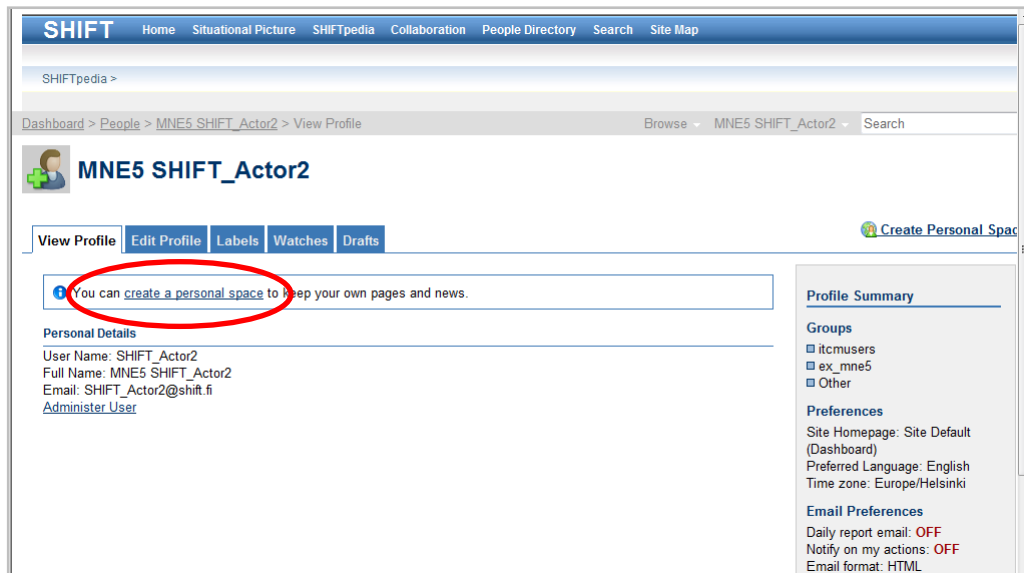
4. **Click the "create a personal page"** link.

On following page the user can customize the personal space to some **extend for instance, choose who can contribute to the user's personal** space and choose the theme of the space.

On the following picture the "left panel view" was chosen for the appearance of the personal page.

5. On the left hand side, there is "Page Operations" menu.

    Click the "Edit" option in the menu. This will enable you to type in the information you have chosen to reveal on yourself and on your possible organization.

6. The user should add labels for describing the content of the personal space, meaning tags related to the user itself and/or to the organization the user is working in. This will facilitate finding potential collaboration partners later on.

7. After typing in the information **click "save".** You can edit the page after saving as well.

4.3.2   How to add picture of user?

1. Click the symbol of on the page.

2. You can choose one of the default icons or upload a picture of **your own. If you choose to upload a picture, click the "Browse", select the correct picture and click "Open". The name of the** selected picture will appear next to Browser button.

3. **Click "Upload" to** display the picture as your profile picture.

4.3.3 How to insert pictures to page?

The following example applies to add pictures or images to your home page as well.

1. Go to a page you want to add a picture.

2. **Click "Edit" button.**

3. Place the cursor to a spot on the page you want to a picture to appear.

4. Click the symbol of inserting/editing of images in the editing panel:

5. The browser will open a new window in which you can **search for the picture to be attached through "Browse".**

6. **After finding the right picture click the "Attach" and then "OK"** as well. The chosen picture will appear on the page.
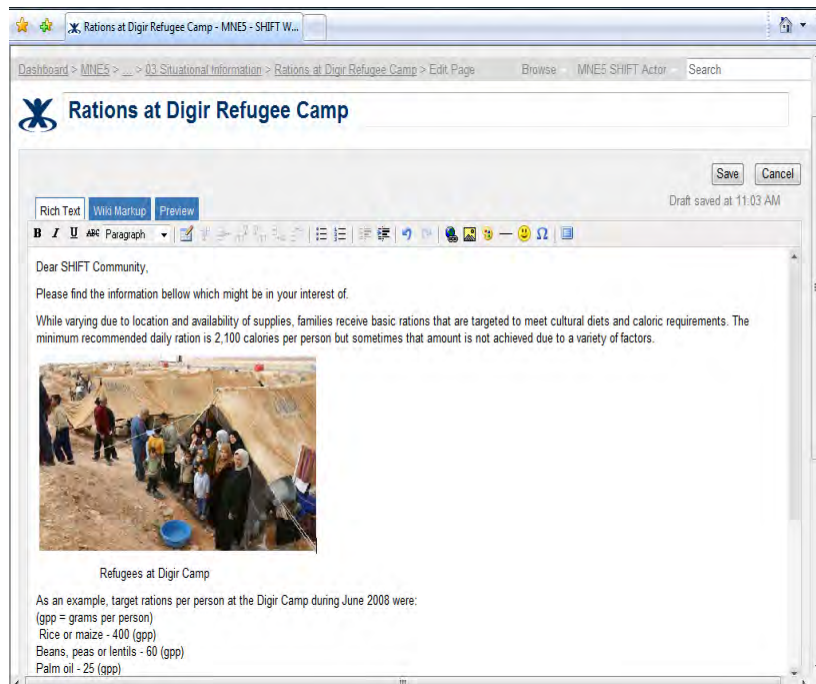

7. Save the page by clicking "Save" on the up right of the page.

4.3.4   How to add attachments or web-links?

SHIFT user may want to add attachments, related to whatever information, to the personal page (or to SHIFTpedia page for a personal page is essentially a SHIFTpedia page). The following steps will guide through attaching documents to a page.

1. **Click the "Attachments (0)" under the menu of "Page operations" (on the left in the** example above).

2. **Use "Browse" tab to find the** file in your folders you want to attach.

3. **When the file has been found, click the "Attach File(s)"** tab. The attached file(s) appears in the Attachments of the page. The file is attached successfully to the page.

4. However, it is recommended to create a link on the page pointing to the attached file. It makes much easier to other user to notice attached files.

    4.1. **Go to the "Page Operations" menu and choose the "Edit".**

    4.2. Type on the page suitable name for a link pointing to the attached file (or to a web-page, see below).

    4.3. Paint the name with your cursor and click "Insert/Edit   Link" tab in the tools menu.

    4.4. **A new window titled as "Link Properties" will appear. Choose the "Attachments"** option and click the file of which you want to create a link.

    4.5. **Accept the selection with "OK" and save** the changes on the page. Now the attached file can be opened just by clicking the link shown on the page.

5. To add web-link:

    5.1. Follow the previous steps 4.1 – 4.3

5.2. **In the "Link Properties" window choose the "External Link" option. A new space** will appear where to type the address.
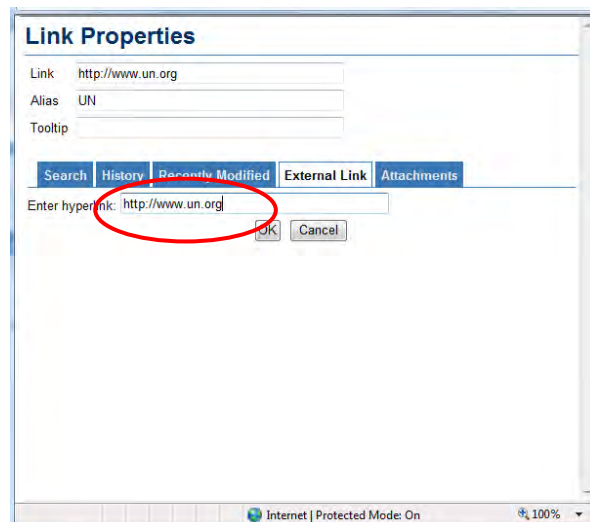
5.3. Type in the web-page address to the field **of "Enter hyperlink" and click "OK".**

5.4. The link will appear on the page. Save the page by clicking **"Save"** button.

6. Finally, when ever user wants to return his or her Personal Space, the space can be found by **clicking the user's user** name in the Navigation panel 2 and selecting **the option "Personal Space" in the submenu.** Please note you need to be in SHIFTpedia to be able to find the Personal Space the way described above.
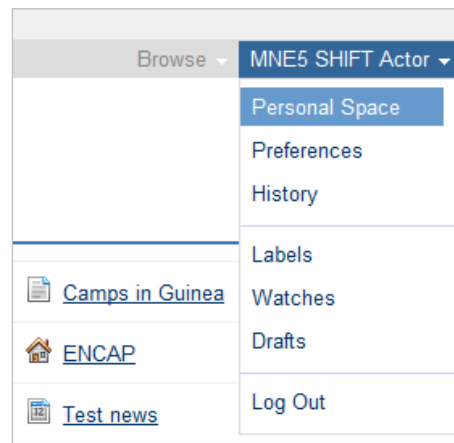
4.4 SHIFTpedia

The main off line information sharing tool in SHIFT is the SHIFTpedia. SHIFTpedia is a Wikipedia-type of collaborative and interactive tool. Any authenticated user may provide content to SHIFTpedia system, where storing, organizing and linking of the data is possible. The added content - text, image or spreadsheet data - is stored hierarchically and can be formatted, if needed. Also separate files can be attached to the pages (see 4.3.3).

The content of SHIFTpedia can be commented and edited further by other users. Commenting SHIFTpedia pages is also one of the means to refine, verify or contradict a piece of information published in SHIFTpedia. In the following will be described how to share information using SHIFTpedia.

4.4.1 How to Browse SHIFTpedia?

1. **Go to "SHIFTpedia" tab on the main** navigation panel.

You will see the front page, which is called also Dashboard, of **SHIFTpedia. There is "Recently Updated" pages on the right hand side,** which gives to a user quick view of the newest pages and updates in SHIFTpedia.

There is a listing of different sections of SHIFTpedia on the left hand side. SHIFT user is able to create separate sections in SHIFTpedia. **These sections are called "Spaces"** which could be utilized for creating separate spaces based on thematic needs, for instance, according the Cluster Approach.

2. **Choose the "Space"** you want to view in the space listing and click it. You will end up to a folder view of the chosen space. For instance, a view of MNE5 space looks as follows:
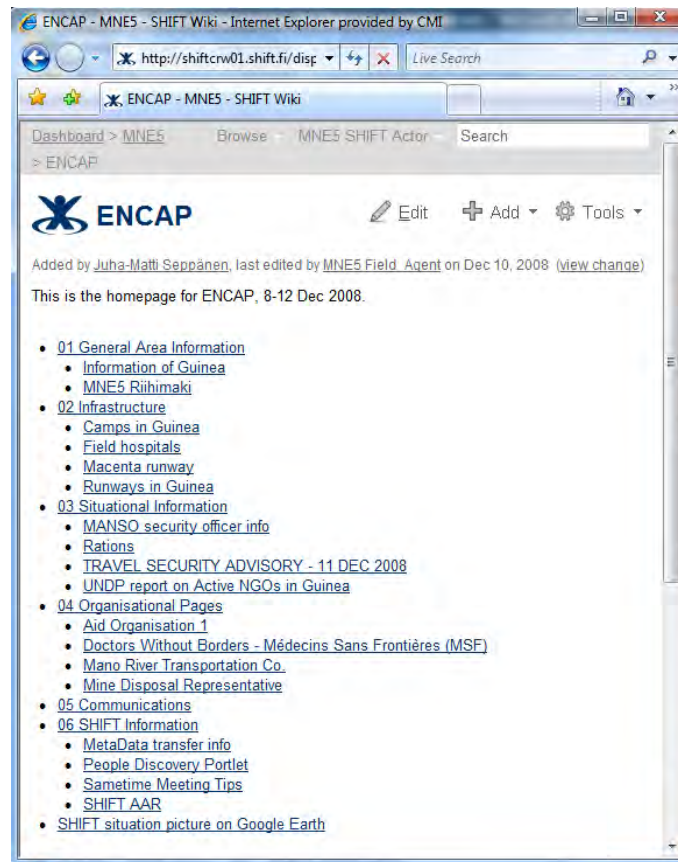
In this case, the links are basically subpages of the homepage of ENCAP. Click any of the links and you will get the information on the particular page.

The SHIFTpedia enables SHIFT users to follow up certain pages especially in their interest. This functionality is called "watch" and is commonly used in many web-pages.

To start follow-up of a SHIFTpedia page:

1. Go to the page you want to start follow up.

2. **Click the "Tools" menu on the page and select the "Watch". The colour of** the symbol featuring an envelope will change slightly as indication the page is being followed up.
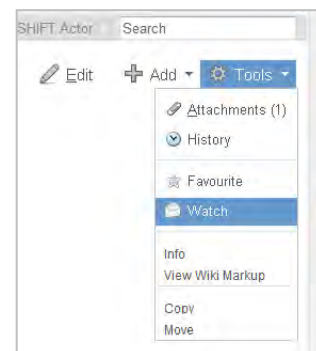
3. You can check which pages you have marked as pages to be followed up by going to your Personal Space menu (see 4.3.4/6) in SHIFTpedia and selecting the option **"Watches" in the submenu.** There you will find a listing labelled **"Page Watches" where all the followed pages are** displayed.

4.4.2   How to create a new page in SHIFTpedia?

To share information and to get widest audience in SHIFT community the easiest way is to create a new SHIFTpedia page.

1. Ensure that you are in one of the SHIFTpedia spaces (see 4.4.1).

2. **Click the "Add" menu on upper right corner of the page and choose the "Page" option.**

3. You will get a blank page in front of you. The first thing you should do is to fill in the title of the new page.

4. Produce the content of the page on the area reserved for text.

5. Before saving (i.e. publishing the new page) add labels in to the "Labels" field at the bottom of the page.

Labels are used to describe the content of the page and thereby, facilitate finding information in SHIFTpedia. The labels should relate one way or another to the information content on the page.

6. Finally, save the page. Now the page will be available for other SHIFT user to be viewed.

7. If you want to attach documents to the page or insert images and links, please see the previous sections 4.3.3 – 4.3.4.

4.5   SHIFTpedia News

In addition to SHIFTpedia pages, another possibility to disseminate information is SHIFT News. The SHIFT News functionality is meant to be a forum to inform SHIFT community on issues:

1. Which might in interest of whole SHIFT community,

2. Which should get attention of SHIFT users as soon as possible, as in case of time critical security related information.

Basically, SHIFT News functionality is a sub-feature of SHIFTpedia and can be found in Navigation panel 2 under the "Browse" menu.
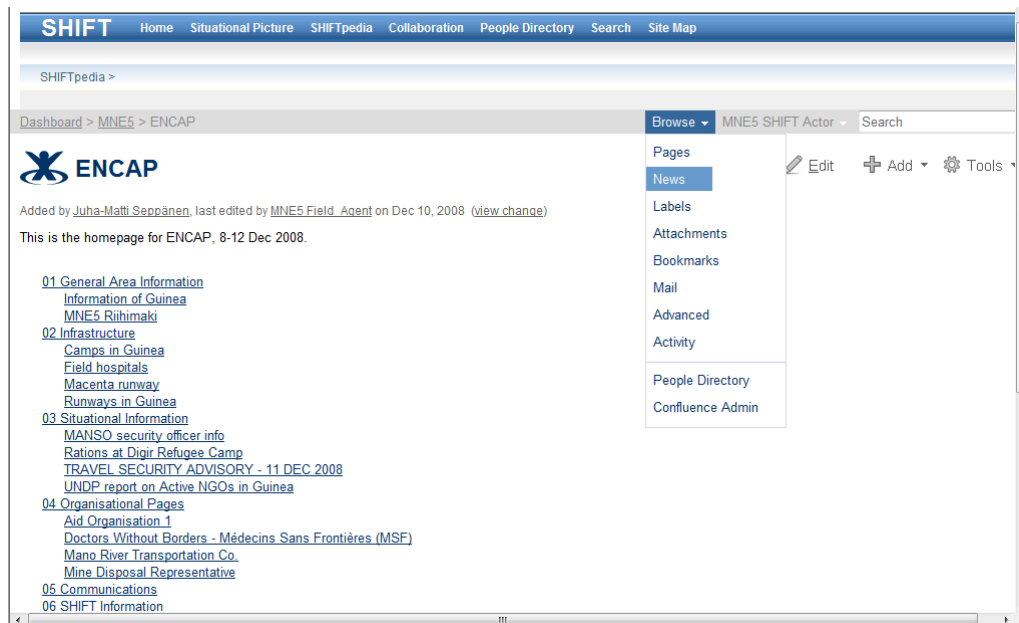
To create a new piece of information in SHIFT News, please see previous section of 4.4.2 on how to create SHIFTpedia page. The procedures are exactly same as in creation of a new SHIFTpedia page.

4.6 Situational Picture

The other main tool for information sharing in SHIFT, alongside with SHIFTpedia, is the Situational Picture. In SHIFT Situational Picture event information is bound to an exact location on map and is visualized with custom-made culture-neutral symbols which have high degree of understandability and thus enable common situational awareness inside SHIFT community.

With good situational awareness better decisions can be made and thereby, increase the efficiency of actions. Situational Picture encourages sharing also information related to available supplies and resources in the field as well as ongoing projects in a certain area, not forgetting that better situational awareness means improved safety and security of staff in crisis areas, for instance through early-warning on threats in the operating area.

The current version of Situational Picture enables to place information on the map related to following nine categories: Incidents, Infrastructure or stable resources, Military obstacles, Operations

(ongoing), Planned operations, Planned units and resources, Plans, Units or resources and Warnings.
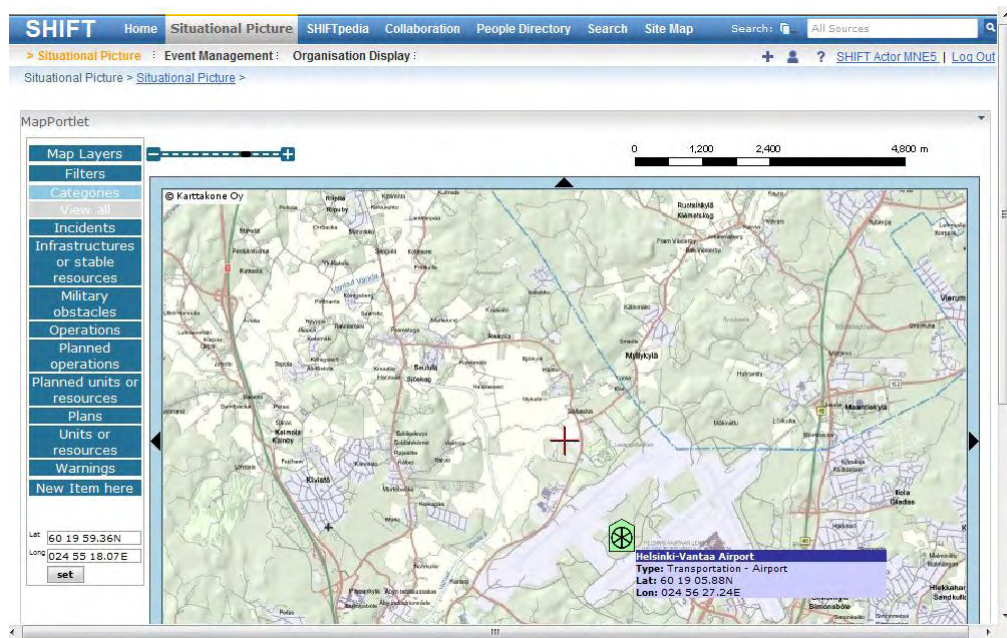
The Situational Picture tool can be found in the Navigation panel 1 (blue back ground).

The Situational Picture tool is also capable of receiving data via standard interfaces such as weather information or RSS feeds. This external data augments the overall picture and facilitates better understanding of the situation.

Under the Situational Picture there is a sub-feature called Event Management and Organisational Display. Both functionalities are explained later on in this chapter.

4.6.1   Browsing the Situational Picture

On the left side of the map there is a menu which contains function such as filtering the map symbols as well as setting a new item on the map. Filters enable users to view only certain type of items on the map, for instance, a user may want to view only incidents and therefore, uses **"Incidents" filter. However, the default setting is the "View all"** which displays all items in all categories. The filters can be activated by clicking a filter.

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Additionally, the content of Situational Picture can be filtered through more detailed option for instance, by sender group of the information/item. These options can be found under subtitle "Filters" in the menu.

"Map Layers" enables SHIFT user to examine the map without symbols. Last in the menu is the "New Item here" which enables user to put new items on the map.

4.6.2   How to Place Items on the Map?

In order to facilitate collaboration and deconfliction inside SHIFT community it is recommended to share information also through Situational picture. The shared information should not only relate to security but could also relate to user's organisational information like placing the operational activities on the map.

The following steps will guide through placing a new item on the map. The easiest way to start the process is to find right location on the map. To navigate on the map:

1. Place the cursor on the map, hold the left mouse button down and drag the cursor any direction. The longer you drag the greater will be the area focused (bigger scale). Keep scaling down while trying to place the red cross on the right spot at the same time.

You can scale up (and down) using the standard scale tool:
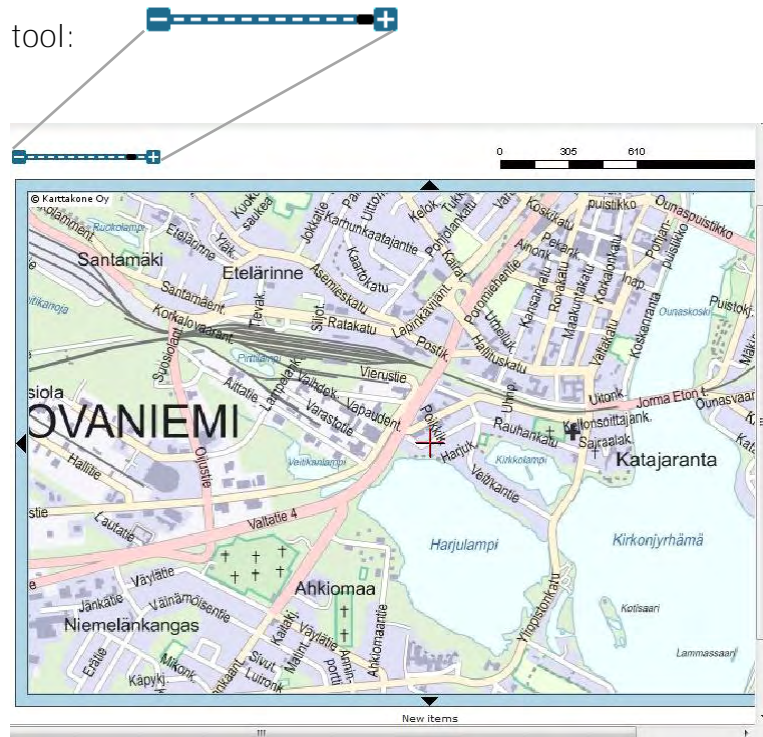
1.1. You can use the black arrows on the sides of the map as well, but those are more suitable to moving around on the map for getting an overview of an area.

2. If you already know the exact latitude and longitude of **the new item, you can directly type them in the "Lat" and "Long" fields and then click the "set". The** red cross will be placed automatically in the correct spot on the map.

Now, as the correct location for the item to be placed on the map has been found, the next step is to select correct category and thus, symbol for the item.

3. **Click the "New Item here" button in the menu on left** side of the map. A new tab for selecting a category for the new item will appear. The options in the category menu are same as the filters.

Select a suitable category for describing the new item.

41

Please note, some of the categories are referring to future activities such as **"Planned operations", "Planned unit or resources" and "Warnings"** while rest of categories refer to ongoing (present) activities, resources etc.
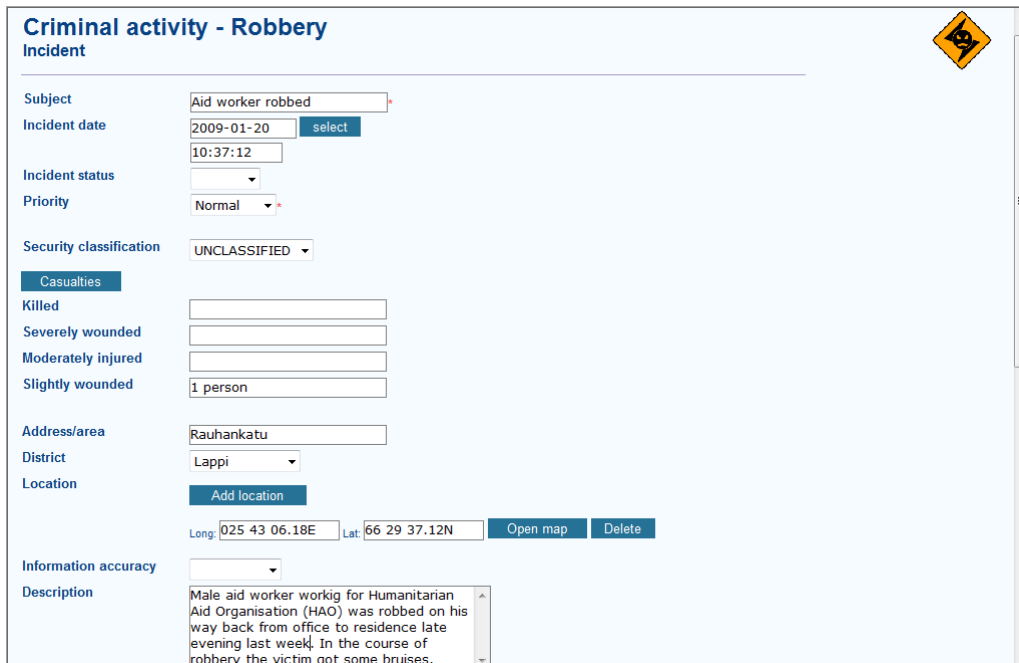
Each category has also its own selection of types for items. The symbols to be shown on the map will vary according the selected type. The time dimension will be indicated with colour according the following table.

Time dimensions and colours of symbols in the Situational Picture tool.[18]

4. When a category has been selected, the next step is to **find correct "type" for the item to be placed on the map.** The selection will be available in the dropdown menu **next to the heading of "Select type". Click the "Select type" dropdown menu and select** a type for describing best way the new item.

5. **After selecting the type, click "Next". You will get a new** form where to put more detailed information about the new item.

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[18] Korpi, Jari (2007).

The texts with dark blue back ground are active fields. **For instance, clicking the "Casualties" you will get new fields to be filled in.**

6. When the description and additional information on the new item has been filled in the form, the next step is to publish the new item on the map for everyone to see.

   Click the "Publish" button at the bottom of the page.

   If you choose the "Save" option, the item will be saved (and seen in the Event Management tool) but will not be visible on the map.

| Description | Male aid worker workig for Humanitarian Aid Organisation (HAO) was robbed on his way back from office to residence late evening last week. In the course of robbery the victim got some bruises. |
| Damages | Stolen wallet and passport. Some bruises. |

Sender

| Name | SHIFT Actor MNE5 | **Organisation** | OTHER |

Comments
Existing comments
Add new comment

It is recommend to avoid moving around on foot at Rauhankatu area during late evenings and night time.

| History |
Assign

| Alerts | Orders | Risk Assessment | Forces | Dynamic | Incidents | Infrastructure | Messages |

Links

| New attachment |

| Save | Send for comments... | Publish... | Cancel |

7. Next, the last form of placing a new item process will appear where you are asked to choose the SHIFT user groups which are allowed to see the new item. As default, everyone is allowed to see any item. Without good reason, not to allow everyone see the item, the default **option should be accept by clicking "Publish".**

Click the "Publish" button.

The new item will appear on the chosen location on the map.

4.7   Event Management Tool

Event Management tool is another SHIFT tool which allows to report, browse and view events, incidents, resources etc. but without map interference. The Situational Picture and Event Management Tool are interconnected and information put in either of the tools will be shown also in the other one. The functionalities and user interface are same in both of the tools.

To report an event, incident, resource etc. in the Event Management tool:

1. Click the "New Document" button and you will get the same report form as in the Situational Picture.

2. See the chapter 4.6.2 on how to proceed with reporting.

The advantage in the Event Management tool is the capability to operate in lower bandwidth conditions as well. Since there is now map interface there is no need to transfer great amounts of graphic data.

Event management tool enables user to transfer the reported events (in Situational Picture or in Event Management) to Google Earth and show as a map layer of Google Earth. For viewing the SHIFT map symbols placed on SHIFT map in Google Earth:

1. Make sure, that you have installed Google Earth in your computer.

2. **Click the "View in Google Earth" button on the Event** management tool window.

3. A new tab will pop up and ask you to save or open a file. The file contains information on items in SHIFT map in a format which is compatible with Google Earth.

   Select "Open" option.

   The Google Earth will open automatically and add the information in the file into the Google Earth system.

4. In Google Earth you need to select the SHIFT map layer to be shown. You can find the layer on the left side of the **layout under "Places" panel. There is a layer labelled** with sub-**title "iCM".**

5. Tick the check box next to the iCM and navigate to the region you want to examine. The map symbols from SHIFT have been transferred into Google Earth and are visible in the map layer.

4.8   Collaboration Tool

The main online information sharing tool in SHIFT is the virtual meeting tool under title **"Collaboration" in the Navigation pan**el 1. While SHIFTpedia and Situational Picture are more for sharing static information (documents, reports, etc.) with all SHIFT users, the Collaboration tool is for sharing information and collaborating through online virtual meetings and text chats with partners.

Virtual meetings and text chat will not replace face to face meetings with partners and colleagues, but will offer a new tool to keep in touch with them and thus, augment the communication procedures and save travel costs.

4.8.1 How to use virtual meeting?

When the "Collaboration" tool is open, following options will appear in the Navigation panel 2: Attend meeting (open by default), New meeting, Scheduled meetings, Recorded meetings and Launch Chat Client. See bellow the short descriptions of the options:

Attend meeting	If there are ongoing meetings in SHIFT those will be listed in the Attend meeting tab. To attend an **ongoing meeting, click "Attend"** button.
New meeting	As the title indicates, this option is for setting up a new meeting (see 4.8.2 for further details).
Scheduled meetings	Virtual meetings can be scheduled in advance to begin in certain time. If there are scheduled meetings, those ones will be listed under Scheduled meetings tab.
Recorded meetings	The Collaboration tool enables recording of a meeting to be reviewed later or to be viewed by those, who were not able to attend a meeting when it was held. Recorded meetings are listed and accessed through Recorded meetings tab. To view a recorded meeting the meeting password is required.
Launch Chat Client	If it is adequate just to have a text chat with partners from point of view of collaboration needs, then the easiest way to initiate a text chat is to use "Launch Chat Client".

4.8.2 Setting up a New Meeting

1. Click the "New meeting" in the Navigation panel 2 (with grey background) and accept any security warnings. You will get the following view:

2. The "Essentials" tab contains some basic information or specification requirements for setting up a new meeting. The obligatory fields are marked with red stars.

   Please fill in:
   - The title of the meeting in to the field of "Meeting name" (obligatory field).

- Information about the meeting for instance; what is the purpose of the meeting? Who is organizing the meeting?

  This information should be placed in the field labelled: "Description or other meeting information".

3. The meeting needs to be scheduled:
   - Either to start right away:

     Tick the "Start Now" check box, or
   - To be started in the future:

     Define "Starting date" and "Time".
   - Reserve enough time for a meeting in the "Duration" slot.

4. Select the audio and video services. The options are: None (only text chat available for direct communication), Audio, Audio and Video.

5. Enter a password for the meeting in the password field. A password is always required for entering a meeting though the meeting would be open for all to join. In this case, it would be practical to place a password in the Description field (see point 2.) where everybody can see it.

   If you want to restrict a meeting to only some members of SHIFT community, please make sure to deliver the password of the meeting to them.

   Restrictions can be put in place also in the "People" tab.

6. If you want to present any files or slides in a meeting, go to the "Slides" tab, click "Add Slides", browse the correct file and click ok. The added file will appear in the "Files" field.

7. Noteworthy in the tab of "Options" is the recording function. To record a meeting for later reviewing you need to tick the check box right bellow the "Recording" title.

8. **Finally, remember to press "Save" button.** You will get a summary of the meeting information and you can still edit the meeting details as required.

4.8.3   Having a Meeting

Next, will be introduced the SHIFT virtual meeting tool Sametime only briefly. It can be assumed that most of the SHIFT users are already computer literate and therefore, there is no need to go through every detail in the Sametime.

We will start by going through various windows in the Sametime view and end up to the navigation panels of Sametime on top of the Sametime window.
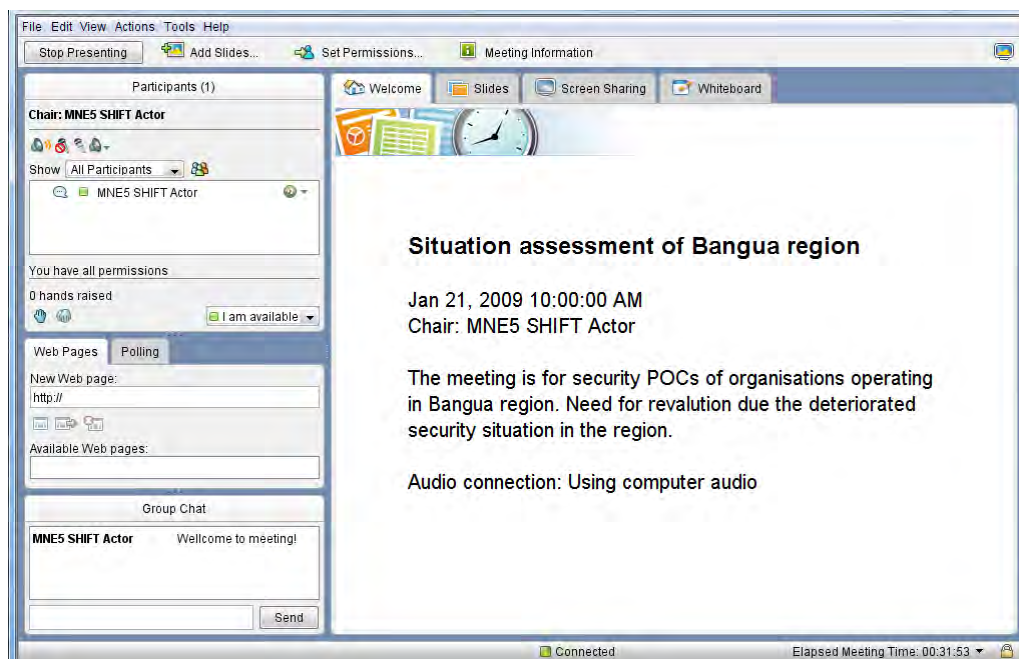
Overview on Sametime, the virtual meeting tool of SHIFT.

1. The **"Participants" window** shows who are attending the meeting and enables adjusting audio options.

Usually the one who established the meeting is the chairman of the meeting as well.

Clicking the speaker symbol a meeting participant can change microphone and speaker volumes.

Clicking the microphone symbols the participant can mute and unmute **the microphone. It's is recommend to keep it** muted always when not speaking.

Clicking the loudspeaker symbol opens a dropdown menu **where the most important option is the "Audio preferences".** In the Audio preferences you should make sure that you have chosen correct devices for audio input and output as well as check that your voice is detected (adjust the microphone level to more sensitive if not detected).

2. The "Web Pages" and "Polling" window enables participants to send WebPages to each other in the meeting and conduct polls on matters under discussion.
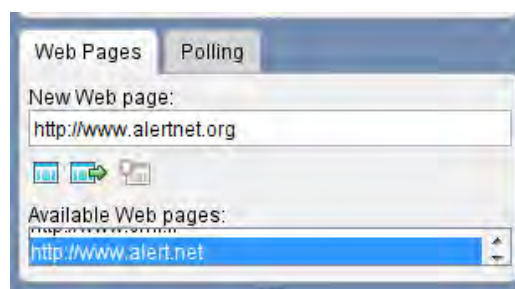
3. The **"Group Chat" window** contains standard chat functionality.
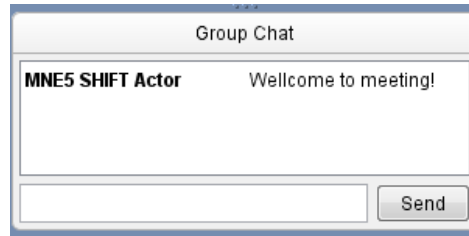
4. The panel above the whiteboard area has three essential functions of the Collaboration tool: presenting slides and files, sharing screen and using whiteboard.
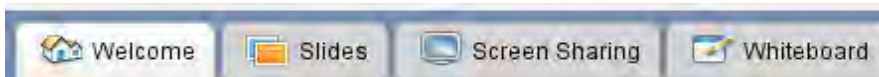
Presenting slides and/or files is a standard capability and similar to giving a Power Point presentation. Whereas sharing screen capability comes in handy for instance, for collaborative writing of a document.

Whiteboard, as the name suggests, is a tool for drawing object and writing short texts, for example bullet points about ongoing meeting.

To show slides and files:

1. Click the "Slides" tab.

2. If you have upload slides or files beforehand in setting up a meeting phase, those will available in a dropdown menu. If not, you can add slides **by pressing the "Add Slides" button in** the navigation panel.

To share screen:

1. Click the "Screen Sharing" tab in the panel.

2. Select which screen sharing mode you would like to use: 1.) The entire screen 2.) Resizable rectangular frame or 3.) A currently **running application, and click "OK".**

3. Next, **the "Sharing Tools" menu will show** up. These tools allow you to control the ongoing sharing. If you have selected either of

	the first two sharing option, an orange sharing frame will pop up as well.
To use whiteboard:	**1. Click the "Whiteboard"** tab in the panel.
	2. You will get a new tool set for drawing objects and producing text on the whiteboard.
	Please note, the drawings and text produced on the whiteboard will not be saved automatically when the meeting is finished.

5. On the upper navigation panel of Sametime are available several sub menus. Most of them contain standardized functions and easy to comprehend. Yet, there are few things which need to be brought up.
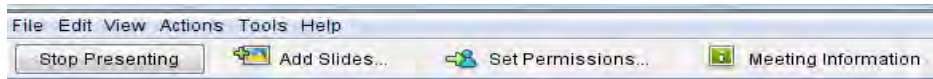
There is two commonly need functions under the **"File" menu:**

Leave Meeting	If you are a participant of a meeting, but not the **chairman of the meeting, you should use "Leave Meeting" option when the meeting has come to** its end.
End Meeting	In case of you are presiding the meeting as the chairman, then you should be the last to leave the mee**ting and use the "End Me**e**ting" option.**
Extending the duration	If the ongoing meeting seem to last longer than anticipated, you may need to extend the duration of the meeting. You can do it by **clicking the "Edit" menu and choosing the first option: "Edit Meeting Information".**

Rest of the options under the menus of the upper navigation panel have more or less standardized functions and there is also a quite extensive help function to guide you through Sametime in more detailed manner.

Finally, few practical points for having virtual meetings in SHIFT and using Sametime:

Meeting Tips for Virtual Meeting:

- When not speaking, keep your microphone muted (otherwise, background noise will disturb the meeting).

- To have the floor, raise the blue glove.

  The chair of the meeting will give the floor to participants one at a time.

  The glove should be lowered after taken the floor by click the symbol next to the raise the glow button.
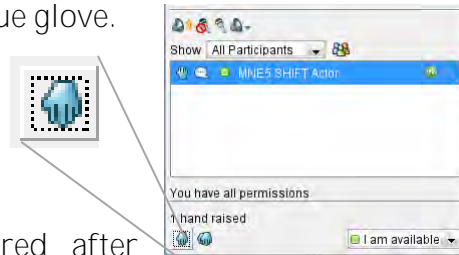
- Use chat to give additional comments without interrupting ongoing discussion.

- If needed to have a private chat with one of the meeting participants, right click the name of the participant in the participants list and select **"New Chat"**.

- The chairman needs to control closely the share screen option and grant or revoke permission for participants one at a time accordingly.

- Do not use your keyboard or mouse while another participant has the control over shared screen, therefore, the screen sharing ought not to last too long as non-stop at a time.

4.8.4 Launch Chat Client

The "Launch Chat Client" under the Collaboration tab is similar to text chat of Sametime. The difference to Sametime text chat is that Chat Client is quicker and easier way to send instant messages and have chat with SHIFT users since there is no need to be logged on a meeting for having a text chat. Thus, a chat initiator can send directly a message to a partner without first inviting the partner to a meeting.

Availability (i.e. that the person is online in SHIFT) is indicated in green in the Chat Client window.

How to launch chat?

First you need to find partner whom to chat with. A prerequisite for this is that you know the SHIFT user name of your partner (usually the name of your partner). Next, you need to add the name to your contact list in the Chat Client.

1. **Click the "Add a person/group"** button in the Chat Client. A new tab will show up.

2. **Type in the name and click "Add" button. You will get a** notification that the person has been successfully added in to your contact list. Click **"OK" and close the tab** unless, you want to add another person.

3. You will see the contacts in green who are online in SHIFT and thus, able to receive chat messages.

4. Double-click one of the contacts and a new chat window will appear.

5. Type in the message you want to send to your contact **and click "Send".**

Your contact will get a pop up window containing your message.
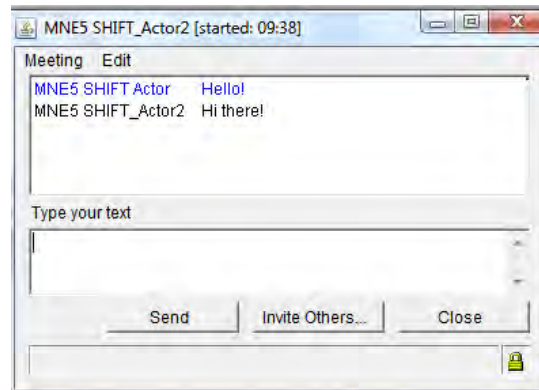
In the course of the chat you are able to invite other partners in your contact list to join the same chat session. However, they will not get automatically the chat log when joining the chat session. Therefore, you may want to copy - paste the previous messages to brief the new comers on what has been discussed earlier.

4. Finally, when you want to end the chat session, click the **"Close" button.**

4.9   People Directory

One of the main ideas behind SHIFT is to facilitate collaboration between various actors involved in crisis management in the field. One basic prerequisite for collaboration is to find a partner whom to collaborate with. The People Directory enables SHIFT users to look for collaboration partners among SHIFT community.
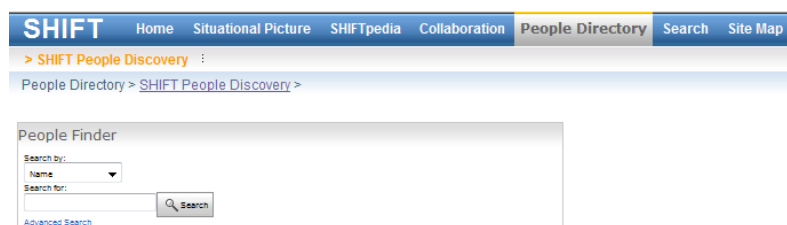
How to find a collaboration partner?

1. **Go to the "People Directory" in the Navigation panel 1** and click the tab. You will get a view of People Finder.

   You can do searches in the People Finder by:

   - Name
   - User ID
   - Email
   - Phone
   - Department
   - Job Title

2. Select the search category (listed above) from the **dropdown menu of "Search by".**

3. **Type in the field of "Search for" a search** term or part of it. The search does not make difference between capital letters or small letters.
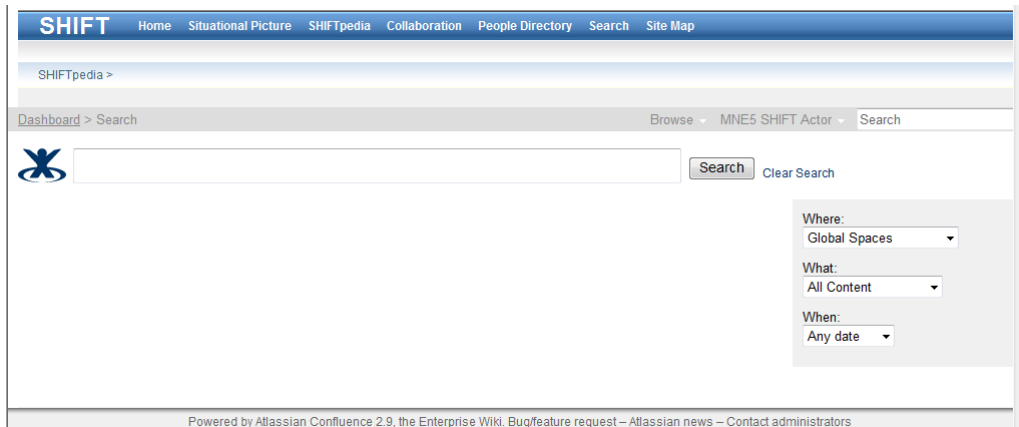
   There is also **"Advanced S**earch**"** which gives you more search option.

4. **Click the "Search" and you will get a listing based on** your search term. The names in the listing are active links with submenus and can be clicked to retrieve more information on the SHIFT user.

4.10   Search

The Search tab contains two sub-features**: "SHIFTpedia Search" and "Search** Center**". SHIFTpedia** Search, as the name indicates, is for searching the content of SHIFTpedia. The Search Center feature is for searching the portal pages.

4.10.1　SHIFTpedia Search
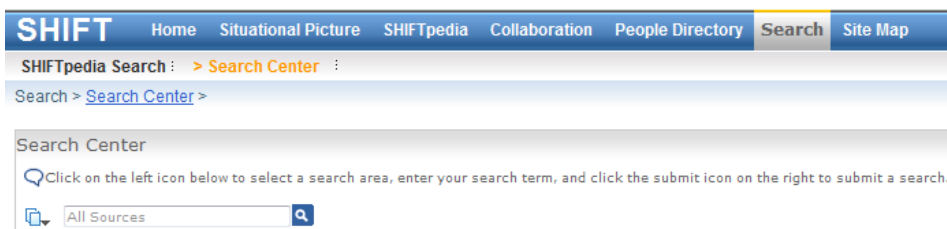
The SHIFTpedia Search searches the content of SHIFTpedia pages using the search term given by SHIFT user. On the right side of the search field there are some options to limit or expand the search.

In the dropdown menu of "Where" a user can select whether the search in all spaces of SHIFTpedia or only one of them.

The "What" dropdown menu offers for a user possibility to choose the type of information which the user is looking for.

The search can be limited by the publishing date of the searched information. These options can be found in the "When" dropdown menu.

4.11　Search Center

The Search Center sub feature of the Search tab enables to search the SHIFT portal pages. It does not search inside the portal pages or subpages of the portal pages but what is written on the main portal pages.

The small icon on the left, next to the search field, contains some search options to limit the search or search results.

The Search Center functionality is also available in the right corner of the Navigation panel 1.

The possibility to search main portal pages may come useful when there are more portal pages to be searched than at the moment.

4.12   Site Map
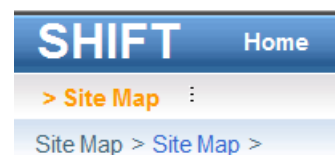
Site Map tab is similar to any other site map functions in any web portals or pages. Under the Site Map SHIFT user will find a listing of pages (SHIFT tools) in SHIFT portal. Some of the items on the list are in form of an active link. If a link is clicked it will automatically open the SHIFT tool indicated in the title of the link.
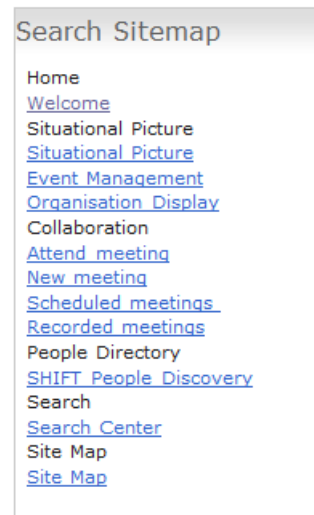
5   *CONCEIVABLE USE CASES FOR SHIFT*

In the following chapter, there are visioned few use cases on how SHIFT could be utilized in different situations. The aim is to give food for thought and inspire a reader to imagine how SHIFT system could facilitate his or her daily work.

5.1   Finding Partners and Coordinating Activities

A developing nation with a shaky but growing economy receives little outside assistance because of its relative prosperity in comparison to its neighbours. Drought in the region is predicted for the third consecutive year, seriously threatening the ability of this country to produce food enough to feed the population. The Emergencies Unit of an INGO decides to begin to monitor the situation in the country, and put contingency plans in place should the predicted drought occur. Using media sources and past experience, the INGO predicts that if there is a drought there will be an increase of the IDPs and refugees in the country and border regions of neighbouring countries, as well as straining health services and transportation networks. The INGO uses regional offices and the expatriate community to build up a picture of what is occurring in the affected country, and uses informal networks to discuss the plans of other INGOs also working in the region.

If SHIFT would be in use:

1. As the member of SHIFT community, the INGO uses SHIFT to find out which organisations among SHIFT community have activities in the region, particularly the Situational Picture proves to be useful on this.

2. The INGO uses also the People Discovery to find the contact details of the organisations active in the region.

3. Finally, the INGO establishes a meeting about the situation in the affected region and invites all relevant parties to the meeting to share information and to discuss the way ahead, potentially in the form of a common effort.

On the other hand the NGOs active in the region:

1. Being members of SHIFT community, use SHIFT to coordinate the emergency response efforts in the region.

2. Due to the poor access to internet and limited band width, they decide to use Launch chat client for online collaboration, Event Management tool for maintaining Situational awareness and SHIFTpedia as off line disseminator of information related to resources etc. With cooperation facilitated by SHIFT they are able to calculate how many people will need shelter, food and water, and are able to coordinate and as well as distribute the needed work in much more efficient manner.

3. Meanwhile at HQ level, the senior staff members of the NGOs work together using the Collaboration tool Sametime and prepare a common press release on the situation and consequences of the drought. As a result, they manage to have a wider impact within the International Community avoiding its indifference.

5.2   Gathering and Disseminating Information

A NGO has established a mail list for disseminating information related to operational security of various actors both governmental and non-governmental organisations working in the field. The organisations find the list very useful but have only limited email storage capacity and list disseminates several emails daily. Often the older emails need to be purged from the mail box and hard drives are already more or less full.

At same time, a professional from a research institute would like to collect the best practices of post war state building and thus, produce a report based on the study results for the use of field practitioners of development cooperation. Another member of the list has a need for any information on road conditions in an African post-conflict state where **the member's organisation is planning a new emergency aid project to** alleviate malnutrition in the area. Both professionals find it hard to gather information through email as well as send heavy reports through email. Moreover, directing the information and requests of piece of information to the right persons is impossible.

If SHIFT would be in use:

1. The requestor of best practices would place the question on SHIFTpedia News page where the wide SHIFT community full of experts from various fields would be able to spot the request. Later, when the study had been finalized, the researcher would share the study results in SHIFTpedia benefitting the entire community and gathering valuable feedback.

2. The requestor of road conditions in a African country would first have a look at the Situational Picture to see what is already available and continue by contacting directly to the organisations operating in the country, indentified by the posted information both in Situational picture and SHIFTpedia.

3. Finally, the NGO administrating the mail list agrees to store all information with heavy attachments in SHIFTpedia available for everyone and settles for sending only now and then notification to the list members to check a new piece of interesting information available in SHIFTpedia.

5.3 Common Situational Awareness, Safer Working Environment

A country embroiled in a civil war has high levels of violence in its capital, motivated by politics, ethnic strife, and criminal desires. One of the common features of the city is checkpoints, run by military, police, vigilante or self-defence groups and, increasingly, criminals posing as police. Citizens caught in criminal checkpoints are often robbed, and sometimes kidnapped or even killed. It is very difficult to avoid criminal roadblocks as they move frequently and are indistinguishable from official checkpoints until it is too late. Citizens of this country often SMS friends and relatives to warn them about checkpoints, and will often call the police to enquire about checkpoints to determine whether they are **"official" or criminal. Computer savvy members of the community have** also begun posting the location of checkpoints using Google Earth, free GIS software available over the web.

If SHIFT would be in use:

1. The computer savvy members of the local community being part of the SHIFT community as well would place their information on checkpoints on the map of the Situational picture.

2. Through common effort of SHIFT community: commenting and updating existing postings in SHIFT and adding new information, the common situational awareness on where the checkpoints are, whether they are official or established by criminals etc. would increase, thus making the movement in the city safer for all.

5.4   Sharing and Verifying Information

During a period of elections in a Central African nation, there was considerable potential for unrest in the capital due to the presence of factional militias supporting both the president and the main opposition leader. Rumours abounded throughout the lead up to the election, and local radio stations broadcast programmes meant to incite violence. Each embassy in the capital offered security alerts to wardens that were appointed to pass these messages on by SMS. There was also an NGO security network within the capital, and a separate one run by the United Nations.

An embassy received a tip from a local staff member that a crowd of opposition supporters had attacked a pro-government TV station and had set it on fire. The embassy passed this information on to other embassies, and to its wardens. At the same time, the embassy decided to cease all movement in the city, and recommended that its citizens do the same.

This message was received by an international journalist, who lived in close vicinity of the TV station, and could see no crowds outside of it. There was considerable smoke in the area, though this was caused by piles of refuse being burned by the local inhabitants. This person called the embassy to refute their alert, and likewise called a friend involved with the NGO security network, which was by this time also passing the embassy alert. The embassy accepted this new information, but was reticent to change their security recommendation until they had confirmed it for themselves.

If SHIFT would be in use:

1. The NGO security network posts the information to SHIFT as unconfirmed, either to SHIFTpedia or to SHIFTnews page. There might be available a map of the city in the Situational Picture as well.

2. All security networks including the UN, embassy, NGOs and media are following the evolving situation also through SHIFT and keeping each other informed using the capability of Launch Chat Client to send instant messages.

3. Whenever new information is received, it is added to the information on the events in SHIFT thus, making the picture of the events bit by bit clearer.

4. The confirmation that there was no security incident was posted quickly to SHIFT. The following days, all actors are able to analyse the events by using the data stored in SHIFT system. They organize a meeting using SHIFT Collaboration tool (Sametime) for assessing the events. Based on the results of the meeting, a common assessment on the events are formed and shared in SHIFT. The assessment also informs the advices given to staff members of the actors.

5.5   Greater Efficiency and Impact

An International NGO operating in a conflict zone had been supporting a local clinic in a rural area for about a decade. This clinic attracted beneficiaries from around the local area, and had sufficient capacity to do so, though it often lacked medicines for minor ailments, and charged a nominal fee for use.

A military unit stationed nearby rotated out after a six month tour, and was replaced by a new one, which decided to implement a number of CIMIC projects in the area and began to run a free clinic once a week only a few hundred meters from the one supported by the INGO, of which they were unaware.

As the consequence, the local population began to use the military clinic swamping the clinic with more clients than they could handle, whereas the old clinic had a surplus capacity. It was not long, however, before military priorities changed and they no longer ran the weekly clinics. The population returned to using the original one, but continued to voice

their disappointment at the lack of minor cures and the nominal fees. Moreover, because of the events, the locals have now low trust to international community and its capability to offer sustainable help.

If SHIFT would be in use:

1. The CIMIC team of the military unit finds out through SHIFTpedia about the already ongoing activities for helping the local population and learns also about INGOs support for the local clinic.

2. The CIMIC team finds the contact details of the INGO representative related the support project in the Home page of the professional in SHIFT.

3. Having a meeting with the professional the military unit decides to channel medical aid to the local clinic and not establish a new clinic on the area. Instead, the saved CIMIC funds are directed to improve the road conditions leading to the local clinic.

4. As a result of the common effort and coordination, the health situation in the area as well as the accessibility of the health services has improved satisfying the local needs.

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ANNEX 1 SYMBOLS OF SITUATIONAL PICTURE

Incidents

Civil disturbance	Dangerous substances	Chemical	Radiological	Nuclear	Biological	Population movement

Environmental	Geologic	Meteorological	Fire	Explosion	Crime	Governmental problems

Human accident	Air accident	Boat accident	Rail accident	Vehicle accident	War activity	Mine accident

Air attack	Disruption of infrastructure	Health problems	Animal attack or infestation

Military Obstacles

Minefield	Roadblock	Unexploded ordnance

Warnings

Civil disturbance	Dangerous substances	Chemical	Radiological	Nuclear	Biological	Population movement

Environmental	Geologic	Meteorological	Fire	Explosion	Crime	Governmental problems

Human accident	Air accident	Boat accident	Rail accident	Vehicle accident	War activity	Mine accident

Air attack	Disruption of infrastructure	Health problems	Animal attack or infestation

Operations

Emergency response	Rescue	Fire suppression	Medical	Evacuation	Search	Reconstruction

Law enforcement	Arrest	Investigation	Military	Humanitarian	Water distribution	Food distribution

Transportation

Planned Operations

Emergency response	Rescue	Fire suppression	Medical	Evacuation	Search	Reconstruction

Law enforcement	Arrest	Investigation	Military	Humanitarian	Water distribution	Food distribution

Transportation

Units and Resources

Emergency response	Rescue	Medical	Patient transportation	Search	Law enforcement	Border patrol

Trade and retail	Fire suppression	Military	Religious	Governmental and municipal	Media	Humanitarian

Reconstruction	Transportation	Materiel transport	Human transport	Criminal

Planned Units and Resources

Emergency response	Rescue	Medical	Patient transportation	Search	Law enforcement	Border patrol

Trade and retail	Fire suppression	Military	Religious	Governmental and municipal	Media	Humanitarian

Reconstruction	Transportation	Materiel transport	Human transport	Criminal

Infrastructure

Emergency response	Fire station	Hospital	Command centre	EMT station	Evacuation point	Pharmacy

Trade and retail	Refugee camp	Military base	Religious institution	Governmental building	Media	Reconstruction office

Police station	Border crossing	Agriculture and food	Water supply	Transportation	Storage	Humanitarian office

Criminal actor installation

ANNEX 2   *BACKGROUND OF MNE5*

The multinational experiment process began in 2001 with Multinational Experiment 1 (MNE 1) investigating the capability of an experimental combined joint task force to conduct collaborative military planning in a technically distributed environment. The first participating countries were Australia, Germany, the United Kingdom, and the United States. Multinational Experiment 2, conducted in 2003, saw Canada and NATO participating with the MNE 1 countries in studying the many factors that impact the ability of nations to share the types of information that are vital to coalition military planning. In 2004, the multinational experiment community added France to the list of participating nations and conducted Multinational Experiment 3. This event examined the issues associated with effects-based planning. The results determined that stability operations are inherently multinational and involve all elements of national power. The follow on experiment, Multinational Experiment 4, conducted in 2006 explored how a coalition would carry out its effects-based military plans in coordination with the advice and perspectives provided by a multinational interagency coordination group. This was the first significant attempt in the multinational experimentation series to expand the scope, or comprehensiveness, of actors involved in coalition operations. Both Finland and Sweden contributed to this event as the eighth and ninth members of the core partnership in the MNE community.

Beginning in June 2006, the MNE community agreed to focus its efforts in MNE 5 on integrating the individual results from previous experiments and examining their interrelationships within a coherent, comprehensive framework, as well as incorporating lessons learned from practitioners in the field. A primary goal has been to develop capabilities for effective, day-to-day involvement across agencies, nations and organizations in order to support crisis planning and action. The MNE 5 community has expanded to include 18 nations, NATO and the European Union. Specifically Austria, Canada, Denmark, Finland, France, Germany, Spain, Sweden, the United Kingdom, the United States, and NATO's Allied Command Transformation (ACT) comprise the partner and participant nations. Additionally, Australia, the Czech Republic, Greece, Hungary, Japan, Poland, Singapore, South Korea, and the European Union are involved as MNE 5 observers. Before discussing **MNE 5 in more detail, it's helpful to understand the Comprehensive** Approach Concept that frames the design and content of the experiment.

Multinational Experiment 5 has been committed to developing a multinational interagency planning and execution methodology for conducting stabilization and reconstruction operations. This effort has required continuous collaboration among the participating nations and organizations to develop a framework plan and to implement and evaluate coalition operations using a comprehensive or whole of government approach. Emphasis has been placed on military support to civilian led operations in a coalition setting. Outcomes of MNE 5 include improved methods to conduct coordinated interagency and multinational planning, implementation and evaluation in order to create and carry out a unified comprehensive strategy.